

GENERAL INFORMATION

Contact Information

Address:

Department of Automation and Systems
Technological Center
Federal University of Santa Catarina
Bairro Trindade
Caixa Postal 476
Florianópolis/SC
88040-900
Brazil

Office: Building C - 1st Floor - Room 220

Phone/Fax: +55 48 3721 7669 / 9934

E-mail: rodrigo.carlson@ufsc.br

Homepage:

<http://rodrigocarlson.paginas.ufsc.br/>

ORCID: 0000-0001-6626-2060

ResearcherID: E-1555-2012

Biography

Rodrigo Castelan Carlson was born in Florianópolis, Brazil, in 1980. He received the Bel.Eng. degree in Control and Automation Engineering and the Me.Eng. degree in Electrical Engineering from the Federal University of Santa Catarina (UFSC), Brazil, in 2004 and 2006, respectively; the Bachelor's degree in Business Administration from the Santa Catarina State University, Brazil, in 2006; and the degree of Doctor from the Technical University of Crete (TUC), Greece, in 2011.

From 2006 to 2007 he was a Research and Development Engineer with the Department of Automation and Systems Engineering (DAS), UFSC. From 2007 to 2011 he was a Research Assistant with the Dynamic Systems and Simulation Laboratory, TUC. From 2011 to 2012 he was a Postdoctoral Researcher with the DAS. From 2012 to 2015 he was an Assistant Professor with the Mobility Engineering Center, UFSC, and from 2015 to 2020 with the DAS at the same university, where he has been an Associate Professor since 2020 and the current head of the department. In 2020 he was a visiting professor at the University of Canterbury, New Zealand. Since 2013 he is accredited to the post graduate program in Automation and Systems Engineering, from 2017 to 2019 to the post graduate program in Electronic Systems Engineering, and during 2015 to the post graduate program in Mechanical Engineering and Sciences, all at UFSC, being one of the founders of the latter two. He is the author or co-author of several technical papers in scientific journals and magazines and in scientific conference proceedings in his areas of interest. His research interests include automatic control and optimization applications to traffic and transportation systems. In these areas, he has been serving as a reviewer for several journals and scientific events as well as a consultant for funding agencies, educational institutions and governmental bodies. He also served as associate editor and/or member of scientific/program committee for several conferences, and guest editor for journals. Since 2018 he is serving as associate editor for the IET Intelligent Transport Journal, since 2020 as review editor for the Frontiers in Future Transportation, and since 2021 as a member of the editorial advisory board of Transportation Research Part C: Emerging Technologies.

Dr. Carlson received a scholarship for postgraduate studies abroad from The Capes Foundation, Ministry of Education of Brazil (during 2007–2011), and the Gold Medal of the Young European Arena of Research 2010 in the pillar “Mobility and Intermodality”. In 2017 and 2022 he was awarded the prize ANPET of Scientific Production in the area of Urban and Freeway Traffic, in 2018 in the area of Transport Management, in 2019 in the area of Logistics, and in 2020 in the area of Transport Planning. For his work as Associate Editor on IET Intelligent Transport Systems he received in 2023 the 2022 IET Outstanding Editor Award. Since 2015 he holds the status of researcher from The National Council for Scientific and Technological Development (CNPq). He is a member of the National Association of Research and Education in Transport (ANPET) and of the Intelligent Transportation Systems Society (ITSS) of the Institute of Electrical and Electronics Engineers (IEEE).

Research Interests

Control systems, information systems, cooperative systems and optimization applied to traffic and transportation systems, including urban and freeway traffic flow control, traffic modeling, connected vehicles, automated driving, and public transportation systems.

Contents

GENERAL INFORMATION	1
Contact Information	1
Biography	1
Research Interests	1
EDUCATION, ACADEMIC POSITIONS, HONORS AND AWARDS	3
Education	3
Complimentary Education	3
Academic Positions	4
Honors and Awards	4
ACTIVITIES	5
Teaching Experience	5
Main Administrative Assignments	6
Grants and Projects	6
Other Relevant Activities	7
PUBLICATIONS	7
Citations	7
Published Journal Papers	8
Published, Organized or Edited Books	9
Published Book Chapters	9
Published Full Papers at Conferences, Symposia and Seminars	9
Published Abstracts and Extended Abstracts at Conferences, Symposia and Seminars	12
Other Publications	13
Technical Reports	13
Invited Talks	13
Software	13
Technological Products	14
Interviews, Round Tables, Press and Media	14
EDITORSHIP, REVIEWING, EVALUATIONS AND EXAMINATIONS	15
Editor for Journals	15
Guest Editor for Journals	15
Reviewer for Journals	15
Associate Editor, Member of Scientific or International Program Committees	16
Reviewer for Conferences, Symposia and Seminars	16
Examiner of Research Proposals and Projects	17
Examiner of Doctoral Dissertations	17
Examiner of Doctoral Qualifying Exams	18
Examiner of Master Theses	18
Examiner of Master Qualifying Exams	20
Examiner of Diploma Theses	20
Examiner of Candidates to Faculty Positions	22
Examiner of Candidates to Temporary Teaching Positions	22
SUPERVISIONS	23
Supervisor of Postdoctoral Researchers	23
Supervisor of Doctoral Dissertations	23
Supervisor of Master Theses	23
Supervisor of Diploma Theses	24
Supervisor of Scientific Education	25
Supervisor of Internships	26
Supervisor of Tutors	28
EVENTS	28
Organization of Conferences	28
Participation on Conferences, Symposia, Workshops and Seminars	29

EDUCATION, ACADEMIC POSITIONS HONORS AND AWARDS

Education

- **Doctor, Production Engineering and Management**, Technical University of Crete, Greece. **Title:** Mainstream traffic flow control on motorways. **Supervisors:** Markos Papageorgiou and Ioannis Papamichail. **Funding:** CAPES Foundation, Ministry of Education of Brazil. (Sep/2007–Sep/2011)
- **Me.Eng., Electrical Engineering**, Federal University of Santa Catarina, Brazil. **Title:** Aplicação de maximização de largura de banda no controle de tráfego urbano em tempo-real. **Supervisors:** Werner Kraus Junior and Eduardo Camponogara. **Funding:** CAPES Foundation, Ministry of Education of Brazil. (Feb/2004–Mar/2006)
- **Diploma, Business Administration**, Santa Catarina State University, Brazil. **Title:** Plano de marketing: Eco Acústica Vibrações e Acústica Ltda. **Supervisor:** Arlindo Carvalho Rocha. (Aug/1998–Dec/2006)
- **Diploma, Control and Automation Engineering**, Federal University of Santa Catarina, Brazil. **Title:** Implementação de algoritmo para controle em tempo real de tráfego urbano. **Supervisor:** Werner Kraus Junior. (Aug/1998–Dec/2003)
- **Elementary and Secondary School**, Colégio de Aplicação, Federal University of Santa Catarina, Brazil. (1987–1997)

Complimentary Education

- Rotinas administrativas básicas para coordenadorias e secretarias administrativas, Duration 35 h, Federal University of Santa Catarina. (2022)
- Curso 2 - Procedimentos do Vestibular - Coordenador de Setor, Duration 10 h, Federal University of Santa Catarina. (2021)
- Curso 2 - Procedimentos do Vestibular - Coordenador de Ala, Duration 10 h, Federal University of Santa Catarina. (2021)
- Curso 2 - Procedimentos do Vestibular - Fiscal do Vestibular, Duration 10 h, Federal University of Santa Catarina. (2021)
- Curso 1 - Conhecendo os Fundamentos do Vestibular, Duration 12 h, Federal University of Santa Catarina. (2021)
- Workshop de Design Thinking, Duration 4 h, Academy UFSC, Federal University of Santa Catarina. (2021)
- As competências na formação em engenharia e nas diretrizes nacionais curriculares nacionais do curso de graduação em engenharia (Resolução MEC/CNE Nº2, de 24 de abril de 2019), Duration 16 h, Federal University of Santa Catarina. (2021)
- Curso SIGPEX: registro de ações de extensão e atividades docentes, Duration 3 h, Federal University of Santa Catarina. (2021)
- Noções básicas de saúde e segurança no trabalho em tempos de COVID 19, Duration 24 h, Federal University of Santa Catarina. (2020)
- Redação oficial: memorando, ofício, ata e portaria, Duration: 30 h, Federal University of Santa Catarina. (2018)
- Internationalization Initiative – English as a Medium of Instruction, Duration: 12 h, University Studies Abroad Consortium. (2018)
- Resolução N. 018/CUn/2006 - Promoção e Progressão, Duration: 8 h, Federal University of Santa Catarina. (2015)
- Planning of Public Transportation Systems, Duration: 15 h, Federal University of Santa Catarina. (2014)
- Teaching practices with the use of digital media, Duration: 54 h, Federal University of Santa Catarina. (2014)

- Acordo ortográfico e revisão gramatical, Duration: 36 h, Federal University of Santa Catarina. (2014)
- The relation professor-student, Duration: 4 h, Federal University of Santa Catarina. (2014)
- Estágio probatório e progressão funcional docente, Duration: 20 h, Federal University of Santa Catarina. (2013)
- Citation and references: NBR10.520/2002, NBR6023/2002, Duration: 2 h, Federal University of Santa Catarina. (2012)
- Sources of information on-line: The CAPES portal, Duration: 2 h, Federal University of Santa Catarina. (2012)
- Basic Concepts of CAD with Solidworks, Duration: 20 h, Federal University of Santa Catarina. (2012)
- Traffic modelling for traffic management and cooperative systems, Duration: 20 h, Technical University of Delft. (2011)
- 8th Short Course on Dynamic Traffic Flow Modelling and Control, Duration: 30 h, Technical University of Crete. (2008)
- Technological Entrepreneurship, Duration: 36 h, Federal University of Santa Catarina. (2003)
- Automação Para Subestações, Duration: 24 h, Lemag Industrial. (2003)

Academic Positions

- **Associate Professor**, Department of Automation and Systems, Federal University of Santa Catarina, Brazil. (Jul/2020–present)
- **Visiting Scholar**, Department of Civil and Natural Resources Engineering, College of Engineering, University of Canterbury, New Zealand. **Funding:** CAPES Foundation, Ministry of Education of Brazil. (Dec/2019–Jul/2020)
- **Assistant Professor**, Department of Automation and Systems, Federal University of Santa Catarina, Brazil. (Jul/2015–Jun/2020)
- **Assistant Professor**, Mobility Engineering Center, Federal University of Santa Catarina, Brazil. (Jul/2012–Jun/2015)
- **Post-doctoral Researcher**, Department of Automation and Systems, Federal University of Santa Catarina, Brazil. **Funding:** CAPES Foundation, Ministry of Education of Brazil. (Dec/2011–Jun/2012)
- **Post-doctoral Researcher**, Department of Automation and Systems, Federal University of Santa Catarina, Brazil. **Funding:** The National Council for Scientific and Technological Development (CNPq). (Oct/2011–Nov/2011)
- **Research Assistant**, Dynamic Systems and Simulation Laboratory, Technical University of Crete, Greece. **Funding:** Research Projects. (Sep/2007–Sep/2011)
- **Research & Development Engineer**, Department of Automation and Systems, Federal University of Santa Catarina, Brazil. **Funding:** Privately funded project. (Apr/2006–Aug/2007)

Honors and Awards

- 2022 IET Outstanding Editor Award for the work as Associate Editor on IET Intelligent Transport Systems, IET - Institution of Engineering and Technology. (2023)
- Prize ANPET of Scientific Production (*Prêmio ANPET de Produção Científica*) in the area of Urban and Freeway Traffic for paper **C49**, ANPET - Associação Nacional de Pesquisa e Ensino em Transportes. (2022)
- Prize ANPET of Scientific Production (*Prêmio ANPET de Produção Científica*) in the area of Models and Techniques in Transport Planning for paper **C44**, ANPET - Associação Nacional de Pesquisa e Ensino em Transportes. (2020)
- Prize ANPET of Scientific Production (*Prêmio ANPET de Produção Científica*) in the area of Logistics for paper **C43**, ANPET - Associação Nacional de Pesquisa e Ensino em Transportes. (2019)

- Prize ANPET of Scientific Production (*Prêmio ANPET de Produção Científica*) in the area of Transport Management for paper **C39**, ANPET - Associação Nacional de Pesquisa e Ensino em Transportes. (2018)
- Prize ANPET of Scientific Production (*Prêmio ANPET de Produção Científica*) in the area of Urban and Freeway Traffic for paper **C34**, ANPET - Associação Nacional de Pesquisa e Ensino em Transportes. (2017)
- Status of Researcher from The National Council for Scientific and Technological Development (CNPq). (2015–2024)
- Certificate of Excellence in Reviewing, Transportation Research Part C, 2013, Elsevier. (2014)
- Approved, after Public Examination, for the position of Assistant Professor in Engineering at the Department of Automation and Systems, Federal University of Santa Catarina. (Jul/2013)
- Approved, after Public Examination, for the position of Assistant Professor in Automatic Control at the Mobility Engineering Center, Federal University of Santa Catarina. (Jan/2012)
- Gold Medal - Young European Arena of Research - YEAR2010 - Pillar: Mobility and Intermodality, European Commission under the 7th Framework Programme. (2010)

ACTIVITIES

Teaching Experience

- Federal University of Santa Catarina
 - Automation and Systems Engineering (graduate level)
 - * Foundations of Discrete Mathematics for Control and Automation - DAS410040 (2016/1)
 - * Traffic Modelling and Control - DAS410062 (2015/2, 2016/2)
 - * Modelling for Optimization - DAS410069 (2017/2, 2018/2, 2019/2, 2020/2)
 - Control and Automation Engineering
 - * Foundations of Information Structure - DAS5102 (2015/2–2024/1)
 - * Industrial Informatics I - DAS5305 (2005/2, 2015/2)
 - * Integration Project - DAS5104 (2016/1–2019/1, 2020/1, 2020/2, 2022/1–2024/1)
 - * Introduction to Informatics for Automation and Control - DAS5334 (2016/2–2019/2)
 - Electronic Systems Engineering (graduate level)
 - * Scientific Method - ESE410019 (2018/1, 2019/1)
 - Mechanical Engineering and Science (graduate level)
 - * Control of Dynamic Systems - ECM410017 (2015/1)
 - Mechatronics Engineering
 - * Control Applied to Vehicular Systems - EMB5612 (2013/2–2015/1)
 - * Digital Control - EMB5602 (2014/1)
 - * Instrumentation - EMB5604 (2012/2, 2013/2)
 - Transportation Engineering and Logistics
 - * Traffic Monitoring and Control Systems - EMB5902 (2013/1, 2013/2, 2014/2, 2015/1)
 - Interdisciplinary in Mobility, Aerospace Engineering, Automotive Engineering, Mechatronics Engineering, Naval Engineering, Railway Engineering
 - * Introduction to Control Systems - EMB5111 (2013/2–2015/1)
 - * Systems Modeling - EMB5113 (2012/2)
 - Interdisciplinary in Mobility, Aerospace Engineering, Automotive Engineering, Mechatronics Engineering, Naval Engineering, Infrastructure Engineering, Railway Engineering, Transportation Engineering and Logistics
 - * Introduction to Computer Programming - EMB5013 (2012/2, 2013/1)
- College of Engineering, University of Canterbury, New Zealand (guest lecturer)
 - Postgraduate program
 - * Traffic Management and Monitoring - ENTR608 (2020/1)
- Keynes Institute and Faculty of Engineering and Professional and Technical Innovation (invited)

- Specialization in Engineering of Highway Infrastructure (graduate level)
 - * Intelligent Transportation Systems (Feb/2015 and Mar/2015)

Main Administrative Assignments

- Head of the Department of Automation and Systems, Federal University of Santa Catarina (Nov/2020–Oct/2024)
- Supervisor of the Laboratory of Information and Communication Technology, Department of Automation and Systems, Federal University of Santa Catarina (Aug/2015–Nov/2019)
- Coordinator of the Bachelor of Mechatronics Engineering, Mobility Engineering Center, Federal University of Santa Catarina. (Nov/2014–May/2015)
- Sub-coordinator of the Bachelor of Mechatronics Engineering, Mobility Engineering Center, Federal University of Santa Catarina. (Apr/2014–Nov/2014)

Grants and Projects¹

- Repensando a modelagem de tráfego em redes de transportes para a nova geração de cidades inteligentes e conectadas, Funded by The National Council for Scientific and Technological Development (CNPq), R\$ 71,066.30 (*US\$ 14,213.00*), co-PI with Cunha, A. L. B. N. da; Marte, C. L.; Caleffi, F.; Almeida Filho, F. G. V. de; Setti, J. R. A.; Bessa Júnior, J. E.; Barros. M. L. de . Research Grant. (Dec/2023–Nov/2026)
- Micro-freight: Sustainable (or not) Last-Mile Delivery Solutions, Funded by the CAPES Foundation (CAPES), R\$ 13,790.00 (*US\$ 2,724.00*), co-PI with Bani Anvari, Academic Mobility Grant. (Apr/2024)
- On-demand electric automated vehicles in large-scale urban networks: evidencing the benefits for a fair, smooth and clean traffic, Funded by the CAPES Foundation (CAPES), R\$ 13,790.00 (*US\$ 4,107.00*), co-PI with Mehdi Keyvan-Ekbtani, Academic Mobility Grant. (Dec/2023–Jan/2024)
- Enhancements to the signal-free path-free intersection control problem of automated vehicles, Funded by the CAPES Foundation (CAPES), R\$ 13,790.00 (*US\$ 2,724.00*), co-PI with Konstantinos Ampountolas, Academic Mobility Grant. (Dec/2023)
- Implementação no Polaris de estratégias de controle de tráfego, Funded by The National Council for Scientific and Technological Development (CNPq), R\$ 8,400.00 (*US\$ 1,703.00*), Scholarship for an undergraduate student. (Sep/2023–Aug/2024)
- Estratégias de controle de tráfego para redução de emissões considerando dispersão atmosférica, Funded by The National Council for Scientific and Technological Development (CNPq), R\$ 8,400.00 (*US\$ 1,703.00*), Scholarship for an undergraduate student. (Sep/2024–Aug/2024)
- Planejamento, gestão e operação de sistemas de mobilidade urbana baseados em dados, Funded by The National Council for Scientific and Technological Development (CNPq), R\$ 72,000.00 (*US\$ 14,207.00*), co-PI with W. Kraus Junior, A. H. Pfitzenreuter, E. Camponogara, J. F. Hübner, R. Cavion, S. B. Lopes, M. P. Roriz Junior, R. M. A. Medrano, W. L. Carvalho. Research Grant. (Apr/2022–Apr/2025)
- Prevenção de colisão de veículos sob condução automatizada em redes de tráfego, Funded by The National Council for Scientific and Technological Development (CNPq), R\$ 6,600.00 (*US\$ 1,163.00*), Scholarship for an undergraduate student. (Sep/2022–Aug/2023)
- Modelagem mesoscópica e controle de tráfego com polaris, Funded by The National Council for Scientific and Technological Development (CNPq), R\$ 6,600.00 (*US\$ 1,163.00*), Scholarship for an undergraduate student. (Sep/2022–Aug/2023)
- Combination of traffic-responsive urban control with perimeter and boundary control, Funded by The National Council for Scientific and Technological Development (CNPq), R\$ 3,200.00 (*US\$ 610.00*), Scholarship for an undergraduate student. (Jan/2022–Aug/2022)
- Combination of traffic-responsive urban control with perimeter and boundary control, Funded by The National Council for Scientific and Technological Development (CNPq), R\$ 4,800.00 (*US\$ 915.00*), Scholarship for an undergraduate student. (Sep/2021–Aug/2022)

¹Values in US dollars are approximations based on the exchange rates at the date of implementation.

- Controle do tráfego de veículos automatizados em interseções reconfiguráveis, Funded by The National Council for Scientific and Technological Development (CNPq), R\$ 4,800.00 (*US\$ 889.00*), Scholarship for an undergraduate student. (Sep/2020–Aug/2021)
- Controle de redes de tráfego com veículos automatizados e conectados, Funded by The National Council for Scientific and Technological Development (CNPq), R\$ 4,800.00 (*US\$ 889.00*), Scholarship for an undergraduate student. (Sep/2020–Aug/2021)
- Controle do tráfego de veículos automatizados em interseções reconfiguráveis, Funded by The National Council for Scientific and Technological Development (CNPq), R\$ 4,800.00 (*US\$ 1,250.00*), Scholarship for an undergraduate student. (Aug/2019–Jul/2020)
- Repensando o uso da infraestrutura viária na era dos veículos conectados/automatizados, Funded by the Newton Fund/CONFAP/FAPESC, R\$ 15,000.00 (*US\$ 3,896.00*), co-PI with Konstantinos Ampountolas, Research Mobility Grant. (Nov/2018–Oct/2019)
- Controle do tráfego de veículos automatizados em interseções reconfiguráveis, Funded by The National Council for Scientific and Technological Development (CNPq), R\$ 38,000.00 (*US\$ 9,743.00*), PI, Research Grant. (Dec/2018–Nov/2021)
- Controle de redes de tráfego com veículos automatizados e conectados, Funded by The National Council for Scientific and Technological Development (CNPq), R\$ 4,800.00 (*US\$ 1,287.00*), Scholarship for an undergraduate student. (Aug/2018–Jul/2019)
- Comparação de estratégias de controle de tráfego de veículos automatizados, Funded by The National Council for Scientific and Technological Development (CNPq), R\$ 4,800.00 (*US\$ 1,535.00*), Scholarship for an undergraduate student. (Aug/2017–Jul/2018)
- Cooperative and Flexible Public Transportation Systems (CFPTS), Funded by the Newton Fund/CONFAP/FAPESC, R\$ 7,000.00 + £1,500.00 (*US\$ 3,994.00*), co-PI with Kostantinos Ampountolas, Research Mobility Grant. (Mar/2016–Feb/2017)
- Análise e controle em tempo real de sistemas de tráfego urbano com base no diagrama fundamental macroscópico, Funded by The National Council for Scientific and Technological Development (CNPq), R\$ 15,000.00 (*US\$ 6,755.00*), PI, Research Grant. (Dec/2013 – Nov/2016)
- Simulação da monitoração e do controle de tráfego no sistema CONTREAL, Funded by a Private Company, R\$ 66,476.70 (*US\$ 17,577.00*), co-PI with Werner Kraus Junior, Research & Development Grant. (Oct/2015–Mar/2016)
- Espaço de Ciência e Tecnologia UFSC/Joinville, Funded by the Ministry of Education of Brazil, R\$ 149,910.00 (*US\$ 61,896.00*), co-PI with Carlos Mauricio Saccheli and Tatiana Renata Garcia, Educational Grant. (Jan/2014–Dec/2015)
- Efeitos do controle de tráfego urbano em tempo real no diagrama fundamental macroscópico, Funded by The National Council for Scientific and Technological Development (CNPq), R\$ 4,800.00 (*US\$ 2,123.00*), Scholarship for an undergraduate student. (Aug/2013–Jul/2014)

Other Relevant Activities

- Member of the Advisory Committee of Control and Automation Engineering for the 2017 National Student Performance Examination (ENADE 2017), National Institute for Educational Studies and Research “Anísio Teixeira”, Ministry of Education, Brazil.

PUBLICATIONS

Citations

- [Web of Science](#): 903; h-index: 12 (as of May 24, 2024)
- [Scopus](#): 1132; h-index: 13 (as of May 24, 2024)
- [Google Scholar](#): 1767; h-index: 16; i10-index: 18 (as of May 24, 2024)
- [ResearchGate](#): 1366; h-index: 14 (as of May 24, 2024)

Published Journal Papers

- J22** Ahmadi, E.; Olama, A.; Carlson, R. C.; Camponogara, E. Signal-free path-free intersection control for connected vehicles under automated driving. **IEEE Transactions on Intelligent Vehicles**, accepted for publication, 2024. [doi](#)
- J21** Souza, F.; Saucedo, R. M.; Mousavizadeh, O.; Carlson, R. C.; Keyvan-Ekbatani, M. On the evaluation and selection of network-level traffic control policies: Perimeter control, TUC, and their combination. **Transportation Research Part A: Policy and Practice**, v. 186, p. 104161, 2024. [doi](#)
- J20** Ahmadi, E.; Carlson, R. C. Model predictive control of connected vehicles under automated driving at path-free signal-free intersections. **Transportes**, v. 31, n. 3, p. 1–16, 2023. [doi](#)
- J19** Paradedá, D. B.; Kraus Junior, W.; Carlson, R. C.; Seman, L. O. Bayesian estimation of passenger boardings at bus stops using Wi-Fi probe requests. **Journal of Transportation Engineering, Part A: Systems**, v. 149, n. 6, p. 04023045-1–04023045-12, 2023. [doi](#)
- J18** Souza, F. A. de; Carlson, R. C.; Müller, E. R.; Ampountolas, K. Multi-commodity traffic signal control and routing with connected vehicles. **IEEE Transactions on Intelligent Transportation Systems**, v. 23, n. 5, p. 4111–4121, 2022. [doi](#)
- J17** Lima, L. F.; Carlson, R. C.; Kraus Jr., W.; Zimmermann, L.; Koehler, L. A. Load-sensitive bus headway control for reducing onboard passenger waiting time. **Transportes**, v. 29, n. 3, p. 1–14, 2021. [doi](#)
- J16** Zimmermann, L.; Coelho, L. C.; Kraus Jr., W.; Carlson, R. C.; Koehler, L. A. Bus trajectory optimization with holding, speed and traffic signal actuation in controlled transit systems. **IEEE Access**, v. 9, p. 143284–143294, 2021. [doi](#)
- J15** Keyvan-Ekbatani, M.; Carlson, R. C.; Knoop, V. L.; Papageorgiou, M. Optimizing distribution of metered traffic flow in perimeter control: queue and delay balancing approaches. **Control Engineering Practice**, v. 110, p. 1–11, 2021. [doi](#)
- J14** Eccel, R. A. L.; Carlson, R. C. Analysis of pickup and delivery and dial-a-ride problems: dynamization methods and benchmark instances. **Transportes**, v. 28, n. 4, p. 103–116, 2020. [doi](#)
- J13** Ampountolas, K.; Santos, J. A. dos; Carlson, R. C. Motorway tidal flow lane control. **IEEE Transactions on Intelligent Transportation Systems**, v. 21, n. 4, p. 1687–1696, 2020. [doi](#)
- J12** Maes, A. de S.; Hoinaski, L.; Meirelles, T. B.; Carlson, R. C. A methodology for high resolution vehicular emissions inventories in metropolitan areas: Evaluating the effect of automotive technologies improvement. **Transportation Research Part D: Transport and Environment**, v. 77, p. 303–319, 2019. [doi](#)
- J11** Paradedá, D. B.; Kraus Jr., W.; Carlson, R. C. Bus passenger counts using Wi-Fi signals: some cautionary findings. **Transportes**, n. 3, v. 27, p. 115–130, 2019. [doi](#)
- J10** Chaves, J. A.; Carlson, R. C.; Müller, E. R.; Kraus Jr., W. Controle do fluxo principal em autoestradas por meio de veículos cooperativos equipados com controle adaptativo de cruzeiro. **Transportes**, n. 3, v. 26, p. 134–144, 2018. [doi](#)
- J9** Marinho, A. T.; Eccel, R. A. L.; Carlson, R. C.; Kraus Jr., W. Calibração do modelo de consumo de combustível do simulador AIMSUN com dados coletados via OBD. **Transportes**, n. 2, v. 26, p. 139–154, 2018. [doi](#)
- J8** Müller, E. R.; Carlson, R. C.; Kraus Jr., W.; Papageorgiou, M. Microsimulation analysis of practical aspects of traffic control with variable speed limits. **IEEE Transactions on Intelligent Transportation Systems**, v. 16, p. 1–12, 2015. [doi](#)
- J7** Carlson, R. C.; Papamichail, I.; Papageorgiou, M. Integrated feedback ramp metering and mainstream traffic flow control on motorways using variable speed limits. **Transportation Research Part C: Emerging Technologies**, v. 46, p. 209–221, 2014. [doi](#)
- J6** Carlson, R. C.; Papamichail, I.; Papageorgiou, M. Mainstream traffic flow control on freeways using variable speed limits. **Transportes**, v. 21, p. 56–65, 2013. [doi](#)
- J5** Carlson, R. C.; Papamichail, I.; Papageorgiou, M. Comparison of local feedback controllers for the mainstream traffic flow on freeways using variable speed limits. **Journal of Intelligent Transportation Systems**, v. 17, p. 268–281, 2013. [doi](#)

- J4** Carlson, R. C.; Papamichail, I.; Papageorgiou, M. Local feedback-based mainstream traffic flow control on motorways using variable speed limits. **IEEE Transactions on Intelligent Transportation Systems**, v. 12, p. 1261–1276, 2011. [doi](#)
- J3** Carlson, R. C.; Papamichail, I.; Papageorgiou, M.; Messmer, A. Optimal motorway traffic flow control involving variable speed limits and ramp metering. **Transportation Science**, v. 44, p. 238–253, 2010. [doi](#)
- J2** Carlson, R. C.; Papamichail, I.; Papageorgiou, M.; Messmer, A. Optimal mainstream traffic flow control of large-scale motorway networks. **Transportation Research Part C: Emerging Technologies**, v. 18, p. 193–212, 2010. [doi](#)
- J1** Kraus Jr., W.; de Souza, F. A.; Carlson, R. C.; Papageorgiou, M.; Dantas, L. D.; Camponogara, E.; Kosmatopoulos, E.; Aboudolas, K. Cost effective real-time traffic signal control using the TUC strategy. **IEEE Intelligent Transportation Systems Magazine**, v. 2, p. 6–17, 2010. [doi](#)

Published, Organized or Edited Books

- B1** Cybis, H. B. B.; Fernandes, C. W. N.; Carlson, R. C. (organizers) **Panorama Nacional da Pesquisa em Transportes 2012**. Rio de Janeiro: ANPET, 2012. 2214 p.

Published Book Chapters

- BC1** Papageorgiou, M.; Carlson, R. C.; Papamichail, I.; Messmer, A. Motorway mainstream traffic flow control. **Honorary Volume for Professor George A. Giannopoulos**. Thessaloniki: Aristotelian University of Thessaloniki, 2012, p. 211–215.

Published Full Papers at Conferences, Symposia and Seminars

- C51** Souza, F. de; Saucedo, R. M.; Mousavizadeh, O.; Carlson, R. C.; Keyvan-Ekbatani, M. Perimeter or network-wide traffic control? A thorough discussion. In: *TRB 103rd Annual Meeting*, Washington, D.C., USA, 2024. [pdf](#)
- C50** Lima, E. R.; Carlson, R. C.; Müller, E. R.; Ampountolas, K.; Souza, F. A. de. Switching logic for the dynamic hard shoulder running control on motorways. In: *37th ANPET - Congresso de Pesquisa e Ensino em Transportes*, Santos, São Paulo, Brazil, 2023. [pdf](#)
- C49** Ahmadi, E.; Carlson, R. C. Model predictive control of multi-vehicle interaction at unsignalized intersections. In: *36th ANPET - Congresso de Pesquisa e Ensino em Transportes*, Fortaleza, Ceará, Brazil, 2022. [pdf](#)
- C48** Carlson, R. C.; Ahmadi, E.; Müller, E. R.; Silva, G. W. S. da. Optimal coordination of connected vehicles under automated driving at path-free signal-free urban intersections. In: *36th ANPET - Congresso de Pesquisa e Ensino em Transportes*, Fortaleza, Ceará, Brazil, 2022. [pdf](#)
- C47** Ahmadi, E.; Carlson, R. C.; Kraus Junior, W.; Taheri, E. Near-optimal coordination of vehicles at an intersection plaza using Bézier curves. In: *VEHICULAR 2022: The Eleventh International Conference on Advances in Vehicular Systems, Technologies and Applications*, Venice, Italy, 2022. [pdf](#)
- C46** Ahmadi, E.; Carlson, R. C.; Kraus Junior, W. K.; Taheri, E. Near-optimal coordination of vehicles at an intersection plaza using finite Fourier series. In: *35th ANPET - Congresso de Pesquisa e Ensino em Transportes*, 100% Virtual, 2021. [pdf](#)
- C45** Curtarelli, L. F.; Kraus Junior, W. K.; Carlson, R. C.; Müller, E. R. Condução ecológica, capacidade viária e consumo de combustível. In: *35th ANPET - Congresso de Pesquisa e Ensino em Transportes*, 100% Virtual, 2021. [pdf](#)
- C44** Lima, L. F.; Carlson, R. C.; Kraus Junior, W. K.; Zimmermann, L.; Koehler, L. A. Redução da espera a bordo por controle de intervalo entre ônibus adaptado ao carregamento. In: *34th Congresso da Associação Nacional de Pesquisa e Ensino em Transportes*, 100% Digital, 2020. [pdf](#)
- C43** Eccel, R. A. L.; Carlson, R. C. Problemas dinâmicos de coleta e entrega com janelas de tempo: análise das instâncias de benchmark. In: *33th Congresso da Associação Nacional de Pesquisa e Ensino em Transportes*, Balneário Camboriú, 2019. [pdf](#)

- C42** Souza, F. A.; Carlson, R. C. Calibração multi-objetivo de modelo de fluxo de tráfego de segunda ordem em rodovias. In: *33º Congresso da Associação Nacional de Pesquisa e Ensino em Transportes*, Balneário Camboriú, 2019. [pdf](#)
- C41** Lima, L. F.; Kraus Jr., W.; Carlson, R. C.; Zimmermann, L. Controlador realimentado de intervalo entre ônibus com ganho variável de acordo com o carregamento. In: *33º Congresso da Associação Nacional de Pesquisa e Ensino em Transportes*, Balneário Camboriú, 2019. [pdf](#)
- C40** Ampountolas, K.; Carlson, R. C. Optimal control of motorway tidal flow. In: *18th European Control Conference*, Napoli, 2019. [doi](#)
- C39** Paradedda, D. B.; Kraus Jr., W.; Carlson, R. C. Estimativa de embarque e desembarque de passageiros por detecção de sinal e Wi-Fi de dispositivos móveis. In: *32º Congresso de Pesquisa e Ensino em Transportes*, Gramado, 2018. [pdf](#)
- C38** Santos, J. A. dos; Baldissera, F. L.; Carlson, R. C. Verificação formal de estratégia de controle de interseção com veículos automatizados. In: *32º Congresso de Pesquisa e Ensino em Transportes*, Gramado, 2018. [pdf](#)
- C37** Müller, E. R.; Wahlberg, B.; Carlson, R. C. Optimal motion planning for automated vehicles with scheduled arrivals at intersections. In: *2018 European Control Conference*, Limassol, Cyprus, 2018, p. 1672–1678. [doi](#)
- C36** Ampountolas, K.; Furtado, H. S.; Carlson, R. C. Motorway tidal flow lane control. In: *15th IFAC Symposium on Control in Transportation Systems*, Savona, Italy, 2018, p. 279–284. [doi](#)
- C35** Oliveira, V. A.; Carlson, R. C.; Kraus Jr., W. Método para estimação do tamanho de fila em vias semaforizadas equipadas com laço detector indutivo. In: *XXXI Congresso Nacional de Pesquisa e Ensino em Transportes*, Recife, 2017.
- C34** Chaves, J. A.; Carlson, R. C.; Müller, E. R.; Kraus Jr., W. Controle do fluxo principal em rodovias por meio de veículos cooperativos equipados com controle adaptativo de cruzeiro. In: *XXXI Congresso Nacional de Pesquisa e Ensino em Transportes*, Recife, 2017.
- C33** Keyvan-Ekbatani, M.; Carlson, R. C.; Knoop, V. L.; Papageorgiou, M. Balancing delays and relative queues at the urban network periphery under perimeter control. In: *Transportation Research Board 96th Annual Meeting*, Washington, D.C., 2017. [trid](#)
- C32** Müller, E. R.; Carlson, R. C.; Kraus Jr., W. Cooperative mainstream traffic flow control on free-ways. In: *1st IFAC Conference on Cyber-Physical & Human-Systems*, Florianópolis, 2016, p. 89–94. (IFAC-PapersOnLine, v. 49, n. 32.) [doi](#)
- C31** Marinho, A. T.; Carlson, R. C.; Kraus Jr., W. Calibração do modelo de consumo de combustível do simulador de tráfego Aimsun com dados coletados via OBD. In: *XXX Congresso de Pesquisa e Ensino em Transportes*, Rio de Janeiro, 2016, p. 1654–1665.
- C30** Dinanga, E. K.; Carlson, R. C.; Hübner, J. F. Multi agent system approach for emergency response process management. In: *XXX Congresso de Pesquisa e Ensino em Transportes*, Rio de Janeiro, 2016, p. 1614–1625.
- C29** Keyvan-Ekbatani, M.; Carlson, R. C.; Knoop, V. L.; Hoogendoorn, S. P.; Papageorgiou, M. Queuing under perimeter control: analysis and control strategy. In: *19th International IEEE Conference on Intelligent Transportation Systems*, Rio de Janeiro, 2016, p. 1502–1507. [doi](#)
- C28** Müller, E. R.; Carlson, R. C.; Kraus Jr., W. Time optimal scheduling of automated vehicle arrivals at urban intersections. In: *19th International IEEE Conference on Intelligent Transportation Systems*, Rio de Janeiro, 2016, p. 1174–1179. [doi](#)
- C27** Müller, E. R.; Carlson, R. C.; Kraus Jr., W. Intersection control for automated vehicles with MILP. In: *14th IFAC Symposium on Control in Transportation Systems*, Istanbul, 2016, p. 37–42. (IFAC-PapersOnLine, v. 49, n. 3.) [doi](#)
- C26** Müller, E. R.; Carlson, R. C.; Kraus Jr., W. Implementing variable speed limits in the Aimsun microscopic traffic simulator. In: *XXIX Congresso de Pesquisa e Ensino em Transportes*, Ouro Preto, 2015.
- C25** Paradedda, D. B.; Kraus Jr., W.; Carlson, R. C. Implantação de faixas exclusivas para ônibus: efeito da troca modal no tráfego de automóveis. In: *XXVIII Congresso de Ensino e Pesquisa em Transportes*, Curitiba, 2014.

- C24** Müller, E. R.; Carlson, R. C.; Kraus Jr., W.; Papageorgiou, M. Microscopic simulation analysis of mainstream traffic flow control with variable speed limits. In: *16th International IEEE Conference on Intelligent Transportation Systems*, The Hague, 2013, p. 998–1003. [doi](#)
- C23** Carlson, R. C.; Papamichail, I.; Papageorgiou, M. Controle integrado de acesso e do fluxo principal em rodovias. In: *XXVII ANPET - Congresso Nacional de Pesquisa e Ensino em Transportes*, Belém, 2013.
- C22** Carlson, R. C.; Manolis, D.; Papamichail, I.; Papageorgiou, M. Integrated ramp metering and mainstream traffic flow control on freeways using variable speed limits. In: *Transport Research Arena 2012*, Athens, 2012. *Procedia: Social and Behavioral Sciences*, v. 48, p. 1578–1588. [doi](#)
- C21** Carlson, R. C.; Manolis, D.; Papamichail, I.; Papageorgiou, M. Integrated ramp metering and mainstream traffic flow control on freeways using variable speed limits. In: *13th IFAC Symposium on Control in Transportation Systems*, Sofia, 2012, p. 110–115. [doi](#)
- C20** Carlson, R. C.; Papamichail, I.; Papageorgiou, M. Controle do fluxo principal de rodovias usando limites de velocidade variáveis. In: *XXVI Congresso Nacional de Pesquisa e Ensino em Transportes*, Joinville, 2012, p. 24–35.
- C19** Müller, E. R.; Carlson, R. C.; Kraus Jr., W. Efeito dos parâmetros do modelo de seguimento veicular do simulador AIMSUN na capacidade em rodovias. In: *XXVI Congresso Nacional de Pesquisa e Ensino em Transportes*, Joinville, 2012, p. 1567–1578.
- C18** Carlson, R. C.; Ragias, A.; Papamichail, I.; Papageorgiou, M. Mainstream traffic flow control of merging motorways using variable speed limits. In: *19th Mediterranean Conference on Control & Automation*, 2011, Corfu, p. 674–681. [doi](#)
- C17** Carlson, R. C.; Papamichail, I.; Papageorgiou, M. Local feedback-based mainstream traffic flow control on freeways using variable speed limits. In: *Special International Conference on Complex Systems: Synergy of Control, Communications and Computing*, Ohrid, 2011, p. 187–194.
- C16** Carlson, R. C.; Papamichail, I.; Papageorgiou, M. Comparison of local feedback controllers for the mainstream traffic flow on freeways using variable speed limits. In: *14th International IEEE Conference on Intelligent Transportation Systems*, Washington, 2011, p. 2160–2167. [doi](#)
- C15** Carlson, R. C.; Papamichail, I.; Papageorgiou, M. Comparação de controladores para o fluxo principal em rodovias com o uso de limites de velocidade variáveis. In: *XXV Congresso de Pesquisa e Ensino em Transportes*, Belo Horizonte, 2011. p. 1054–1065.
- C14** Carlson, R. C.; Papamichail, I.; Papageorgiou, M.; Messmer, A. Variable speed limits as a mainline metering device for freeways. In: *5th International Congress on Transportation Research*, Volos, 2010.
- C13** Papageorgiou, M.; Papamichail, I.; Carlson, R. C.; Messmer, A. Nonlinear optimal control as a source of intelligent traffic control. In: *5th IMA Conference on Mathematics in Transport*, London, 2010.
- C12** Carlson, R. C.; Papamichail, I.; Papageorgiou, M. Local feedback-based mainstream traffic flow control on freeways using variable speed limits. In: *13th International IEEE Conference on Intelligent Transportation Systems*, Funchal, 2010. [doi](#)
- C11** Carlson, R. C.; Papamichail, I.; Papageorgiou, M. Controle realimentado local do fluxo principal em rodovias com o uso de limites de velocidade variáveis. In: *XXIV Congresso Nacional de Pesquisa e Ensino em Transportes*, Salvador, 2010.
- C10** Carlson, R. C.; Papamichail, I.; Papageorgiou, M.; Messmer, A. Variable speed limits as a mainline metering device for freeways. In: *89th Annual Meeting of the Transportation Research Board*, Washington, D. C., 2010
- C9** Carlson, R. C.; Papamichail, I.; Papageorgiou, M.; Messmer, A. Optimal mainstream traffic flow control of motorway networks. In: *European Control Conference 2009*, Budapest, 2009. [url](#)
- C8** Carlson, R. C.; Papamichail, I.; Papageorgiou, M.; Messmer, A. Optimal mainstream traffic flow control of motorway networks. In: *12th IFAC Symposium on Control in Transportation Systems*, Redondo Beach, 2009. [doi](#)
- C7** Papageorgiou, M.; Carlson, R. C.; Papamichail, I.; Messmer, A. Optimal mainstream traffic flow control of large-scale motorway networks. In: *Models and Technologies for Intelligent Transportation Systems*, Rome, 2009, p. 66–73.

- C6 Carlson, R. C.; Lueders, C. E.; Dantas, L. D. PYBAND: um aplicativo multi-plataforma para a coordenação de vias arteriais semaforizadas. In: *XXI Congresso Nacional de Pesquisa e Ensino em Transportes*, Rio de Janeiro, 2007.
- C5 Rocha, A. C.; Carlson, R. C.; Araújo, T. S. Análise comparativa de metodologias para elaboração de planos de marketing: introdução a uma proposta direcionada às micro e pequenas empresas. In: *Congresso Virtual Brasileiro de Administração*, 2007.
- C4 Carlson, R. C.; Kraus Jr., W.; Camponogara, E. Combining the TUC urban traffic control strategy with bandwidth maximisation. In: *11th IFAC Symposium on Control in Transportation Systems*, Delft, 2006. [doi](#)
- C3 Camponogara, E.; Carlson, R. C.; Kraus Jr., W.; Moreira, G. A probing look into cutting-plane algorithms for bandwidth maximization. In: *11th IFAC Symposium on Control in Transportation Systems*, Delft, 2006. [doi](#)
- C2 Carlson, R. C.; Kraus Jr., W.; Camponogara, E. Aplicação de maximização de largura de banda no controle de tráfego urbano em tempo-real. In: *XX Congresso de Pesquisa e Ensino em Transportes*, Brasília, 2006.
- C1 Carlson, R. C.; Kraus Jr., W. Controle semafórico sem bloqueio com prioridade para transporte coletivo urbano. In: *X Congresso Chileno de Ingeniería de Transportes*, Concepción, 2001.

Published Abstracts and Extended Abstracts at Conferences, Symposia and Seminars

- A20 Muracchini, P. A. B.; Carlson, R. C.; Souza, F. A. de. Integração dos simuladores Polaris, Autonomie e AERMOD. In: *37^o Congresso Nacional de Pesquisa e Ensino em Transportes*, Santos, 2023.
- A19 Maya, R. W.; Ahmadi, E.; Carlson, R. C. On-ramp merging in lane-free freeways using the SPIC algorithm. In: *37^o Congresso Nacional de Pesquisa e Ensino em Transportes*, Santos, 2023.
- A18 Souza, F. A. de; Carlson, R. C.; Ampountolas, K. Improving rolling horizon controller for integrated signal timing and route assignment. In: *3rd International Symposium on Management of Future Motorway and Urban Traffic Systems (MFTS 2020)*, Luxembourg, 2020.
- A17 Ampountolas, K.; Carlson, R. C. A kinematic wave theory of tidal traffic flow. In: *2nd Symposium on Management of Future motorway and urban Traffic Systems (MFTS 2018)*, Ispra, 2018. [doi](#)
- A16 Furtado, H. S.; Carlson, R. C. Plataforma para a avaliação de estratégias de controle de interseções automatizadas. In: *XXXI Congresso Nacional de Pesquisa e Ensino em Transportes*, Recife, 2017.
- A15 Santos, J. A. dos; Furtado, H. S.; Carlson, R. C.. Inserção do tráfego de veículos automatizados oriundos de rampas de acesso em rodovias. In: *XXXI Congresso Nacional de Pesquisa e Ensino em Transportes*, Recife, 2017.
- A14 Eccel, R. A. L.; Carlson, R. C. Avaliação de estratégias de espera e realocação para problemas dinâmicos de coleta e entrega com janelas de tempo. In: *XXXI Congresso Nacional de Pesquisa e Ensino em Transportes*, Recife, 2017.
- A13 Müller, E. R.; Carlson, R. C.; Kraus Jr., W. Mixed-integer linear programming modeling for the control of automated vehicles through intersections. In: *1st Symposium on Management of Future Motorway and Urban Traffic Systems*, Chania, 2016. [url](#)
- A12 Souza, F. A. de; Carlson, R. C.; Müller, E. R.; Kraus Jr., W. Optimal urban traffic signal control and route guidance based on the store-and-forward model. In: *1st Symposium on Management of Future Motorway and Urban Traffic Systems*, Chania, 2016. [url](#)
- A11 Jurask, G.; Carlson, R. C. Efeitos do controle de tráfego urbano no diagrama fundamental macroscópico. In: *XXVIII Congresso de Ensino e Pesquisa em Transportes*, Curitiba, 2014.
- A10 Kollross, A.; Delatorre, R. G.; Cunha, T. V.; Carlson, R. C. Desenvolvimento de aparelho de baixo custo para a técnica de spin coating. In: *24^o Seminário de Iniciação Científica da UFSC*, Florianópolis, 2014.
- A9 Jurask, G.; Carlson, R. C. Efeitos do controle de tráfego urbano no diagrama fundamental macroscópico. In: *24^o Seminário de Iniciação Científica da UFSC*, Florianópolis, 2014.
- A8 Bonfanti, S.; Medeiros, L.; Hoepers, N.; Carlson, R. C. Sistemas urbanos em Joinville: transporte de pessoas. In: *3^o Seminário de Iniciação Científica do Ensino Médio da UFSC*, Florianópolis, 2013.

- A7** Müller, E. R.; Carlson, R. C.; Kraus Jr., W. Avaliação em ambiente de microsimulação de controladores para fluxo principal em rodovias. In: *XXVI Congresso Nacional de Pesquisa e Ensino em Transportes*, Joinville, 2012, p. 1519–1522.
- A6** Carlson, R. C.; Papamichail, I.; Papageorgiou, M. Local feedback-based mainstream traffic flow control on motorways using variable speed limits. In: *NEARCTIS 3rd Workshop: towards new research area in co-operative traffic management*, Lausanne, 2010.
- A5** Carlson, R. C.; Papamichail, I.; Papageorgiou, M. A local feedback controller for mainstream traffic flow control using variable speed limits. In: *Young European Arena of Research 2010*, Brussels, 2010. [pdf](#)
- A4** Papageorgiou, M.; Carlson, R. C.; Papamichail, I.; Messmer, A. Optimal mainstream traffic flow control of motorway networks. In: *13th EURO Working Group on Transportation Meeting*, Padua, 2009.
- A3** Carlson, R. C.; Kraus Jr., W.; Camponogara, E. Controle de tráfego em tempo real com maximização de banda. In: *XIX Congresso Nacional de Pesquisa e Ensino em Transportes*, Recife, 2005.
- A2** Carlson, R. C.; Dantas, L. D. Desenvolvimento de uma central de tráfego. In: *III Semana de Pesquisa e Extensão da Universidade Federal de Santa Catarina*, Florianópolis, 2003.
- A1** Carlson, R. C.; Kraus Jr., W. Controle semaforico automatizado: Aplicação em transporte coletivo urbano. In: *I Encontro Nacional de Estudantes de Engenharia de Controle e Automação*, Florianópolis, 2001.

um res

Other Publications

- O1** Carlson, R. C. Controle perimétrico do tráfego urbano. **PosAutomação - revista do Programa de Pós-graduação em Engenharia de Automação e Sistemas**: Aplicações, n. 6, p. 37–38, May/2023. [pdf](#)

Technical Reports

- R3** Carlson, R. C.; Silva, G. M. Avaliação do controlador BTC3012 Smart segundo a norma brasileira NBR16653:2017 (Technical Report), Brascontrol Indústria e Comércio Ltda., 2022.
- R2** Mikowski, A.; Fernandes, C. W. N.; Casali, R. M.; Carlson, R. C. Complimentary expert report for public civil action N^o 5013717-53.2012.404.7201/SC, Federal Court of Justice of Brazil, 2013.
- R1** Mikowski, A.; Fernandes, C. W. N.; Casali, R. M.; Carlson, R. C. Expert report for public civil action N^o 5013717-53.2012.404.7201/SC, Federal Court of Justice of Brazil, 2013.

Invited Talks

- T5** Carlson, R. C. Veículos Autônomos (?). Instituto Federal de Santa Catarina, 2020.
- T4** Carlson, R. C. Autonomous Vehicles (?). University of Canterbury, 2020.
- T3** Carlson, R. C. Veículos Autônomos (?). XXVII Seminário de Informática e Computação - SEM-INCO, 2019.
- T2** Carlson, R. C.; Taglialenha, S. L. S. A política nacional de mobilidade urbana e o plano de mobilidade. Secretaria de Desenvolvimento Regional de Joinville, 2014.
- T1** Carlson, R. C. Mainstream Traffic Flow Control on Motorways Using Variable Speed Limits. *Dynamisch Verkeersmanagement in België: meer halen uit variabele snelheidslimieten?* (Dynamic Traffic Management in Belgium: can we take more out of variable speed limits?). Workshop within the 2nd International Conference on Models and Technologies for ITS, 2011.

Software

- S8** Carlson, R. C.; Correa, T. iTUCAIMSUN: a TUC strategy interface for AIMSUN, 2008.
- S7** Souza, F. A.; Dantas, L. D.; Kraus Jr., W.; Carlson, R. C.; Camponogara, E. CONTREAL: a real-time traffic control software center, 2008.

- S6 Carlson, R. C.; TUC module: a wrapped module of the TUC strategy for use of source code in C with Python, 2007.
- S5 Carlson, R. C.; Lueders, C. E.; Dantas, L. D. PyBand: a bandwidth maximization software, 2007.
- S4 Arantes, V. T. P.; Cuareli, F. H.; Carlson, R. C. An application for the study of the perception and production of final obstruents by Brazilian children studying English, 2006.
- S3 Carlson, R. C.; TUCInterface: a TUC strategy interface for SITRA-B+, 2005.
- S2 Carlson, R. C.; Dantas, L. D.; Kraus Jr., W. A Fixed-time Plan Software Center, 2003.
- S1 Carlson, R. C.; SyncSimula: an interface for the use of real-time traffic control strategies with SITRA-B+, 2000.

Technological Products

- P1 Carlson, R. C.; Silveira, A. N.; Carlson, L. H. C. Digital display for a vacuum gauge with serial interface for on-off control of a vacuum pump through microcomputer, 2003.

Interviews, Round Tables, Press and Media

- I20 Carlson, R. C. **Transitando pela Ilha - Episódio 3**, Rádio Ponto UFSC, Florianópolis, Outubro/2023. Interviewed by Luiz Felipe de Moraes. [url](#)
- I19 Carlson, R. C. **Transitando pela Ilha - Episódio 2**, Rádio Ponto UFSC, Florianópolis, Outubro/2023. Interviewed by Luiz Felipe de Moraes. [url](#)
- I18 Carlson, R. C. Mobilidade: guinchos não disponíveis 24h contribui para transtornos no trânsito em Florianópolis. **Balanço Geral**, NDTV, Florianópolis, 20/Outubro/2023. Interviewed by Juliana Rabelo. [url](#)
- I17 Carlson, R. C. Projeto deve criar 500 vagas subterrâneas em Florianópolis. **NSC Notícias**, NSC TV, Florianópolis, 19/September/2023. Interviewed by Bruna Radtke. [url](#)
- I16 Moré, A. O.; Carlson, R. C.; Baldissera, F. Linguagens Computacionais e Saúde: O que você precisa saber para se manter atualizado. **I Jornada da Inovação em Saúde MEDhub UFSC**, 5/September/2023. Round Table. [url](#)
- I15 Carlson, R. C. Problemas recorrentes de sincronia e de furto de fios impactam na mobilidade de Florianópolis. **Balanço Geral**, NDTV, Florianópolis, 31/August/2023. Interviewed by Paulo José Mueller. [url](#)
- I14 Carlson, R. C. Licitação vai ser aberta para contratação de empresa para sincronizar semáforos de Florianópolis. **Balanço Geral**, NDTV, Florianópolis, 16/June/2023. Interviewed by Alexandre Mendonça. [url](#)
- I13 Ahmadi, E.; Carlson, R. C. Doutoranda e Prof. do PosAutomação são premiados no 36º ANPET. **PosAutomação - revista do Programa de Pós-graduação em Engenharia de Automação e Sistemas**: Aplicações, n. 6, p. 37–38, May/2023. [pdf](#)
- I12 Carlson, R. C. **Condomínio Legal**, CBN Floripa 90.3 FM (Radio), Florianópolis, 6/May/2023. Interviewed by Renato Igor. [url](#)
- I11 Carlson, R. C. Binário na UFSC: Duas semanas após implantação, moradores ainda cobram mudança - Tempo de transporte de ônibus é diminuído em 23 minutos, de acordo com a prefeitura. **Seção Cotidiano**, Hora de SC (online/print), Florianópolis, 3/May/2023. Uncredited mention. [url](#)
- I10 Carlson, R. C. Binário Carvoeira-Pantanal: Secretaria de Transportes prevê contagem de tráfego nos próximos dias em Florianópolis. **Bom Dia Santa Catarina**, NSC TV, Florianópolis, 3/May/2023. Interviewed by Juan Todescatt. (rerun of the interview in I4) [url](#)
- I9 Carlson, R. C. Secretaria de Transportes prevê contagem de tráfego nos próximos dias em Florianópolis: Binário Carvoeira - Pantanal tem fiscalização em pontos estratégicos e nos horários de pico da Guarda Municipal. **Jornal do Almoço**, NSC TV, Florianópolis, 2/May/2023. Interviewed by Juan Todescatt. [url](#)
- I8 Ahmadi, E.; Carlson, R. C. Doutoranda e Professor do Pós Automação da UFSC são premiados no 36º ANPET. **Divulga UFSC**, Florianópolis, UFSC, n. 1962, 6/December/2022. [url](#)

- I7 Lima, L. F.; Zimmermann, L.; Kraus Junior, W.; Carlson, R. C.; Koehler, L. A. Trabalho de pesquisadores da Pós em Engenharia de Automação e Sistemas é premiado no congresso nacional. **Notícias da UFSC**, Florianópolis, UFSC, 23/November/2020. [url](#)
- I6 Eccel, R. A. L.; Carlson, R. C. Trabalho de pesquisadores da UFSC é premiado em congresso nacional. **Notícias da UFSC**, Florianópolis, UFSC, 14/November/2019. [url](#)
- I5 Paradedá, D. B.; Kraus Junior, W.; Carlson, R. C. Trabalhos da UFSC são premiados no Congresso da Associação de Pesquisa e Ensino em Transportes. **Notícias da UFSC**, Florianópolis, UFSC, 9/November/2018. [url](#)
- I4 Chaves, J. A.; Carlson, R. C.; Müller, E. R.; Kraus Junior, W. Pesquisadores da UFSC recebem prêmio em Congresso Nacional de Pesquisa e Ensino em Transportes. **Notícias da UFSC**, Florianópolis, UFSC, 3/November/2017. [url](#)
- I3 Carlson, R. C. Sinal verde para quem precisa. **Revista da Fundação de Amparo à Pesquisa e Extensão Universitária**, Florianópolis, FAPEU, v. 9, ano IX, n. 9, p. 24, 2016. Interviewed by Dauro Veras. [url](#)
- I2 Calil, L. F. P.; Carlson, R. C.; Dantas, L. H.; Harger, W.; Medeiros, G.; Viana, E. A. Mesas Preparatórias aos Seminários de Mobilidade Urbana - Conselho Regional de Joinville, Round Table, 2014.
- I1 Carlson, R. C. and others. Via Expressa em discussão. **Floripa é**, Florianópolis, RIC, n. 3, p. 28–30, Mar/2014. Interviewed by Marco Túlio Brüning. [url](#)

EDITORSHIP, REVIEWING, EVALUATIONS AND EXAMINATIONS

Editor for Journals

- Transportation Research Part C: Emerging Technologies - Advisory Board (2021–)
- Frontiers in Future Transportation - Review Editor (2020–)
- IET Intelligent Transport Systems - Associate Editor (2018–)

Guest Editor for Journals

- Special Issue on Management of Future Motorway and Urban Traffic Systems — Transportation Research Part C: Emerging Technologies, v. 96, p. 1–2, Elsevier — with Claudio Roncoli, Nikolaos Bekiaris-Liberis, and Nikolas Geroliminis (2018) [doi](#)
- Special Issue on Emerging Information and Communication Technologies for Traffic Estimation and Control — Journal of Advanced Transportation, v. 2018, Article ID 8498054, Wiley-Hindawi — with Anastasios Kouvelas, Andy Chow, Eric Gonzales, and Mehmet Yildirimoglu (2018) [doi](#)

Reviewer for Journals

- Applied Mathematical Modelling (2010)
- Automatica (2019–2021)
- Canadian Journal of Civil Engineering (2017)
- Case Studies on Transport Policy (2021)
- Cogent Engineering (2021)
- Communications in Nonlinear Science and Numerical Simulation (2016–2017)
- Complexity (2020)
- Discrete Dynamics in Nature and Society (2020)
- European Transport Research Review (2022–2023)
- Frontiers of Information Technology & Electronic Engineering (2016)
- Frontiers in Future Transportation (2020–2022)
- IEEE Access (2020)
- IEEE Control Systems Letters (2023–2024)

- IEEE Open Journal of Intelligent Transportation Systems (2021)
- IEEE Transactions on Automation Science and Engineering (2019–2020)
- IEEE Transactions on Intelligent Transportation Systems (2011–2024)
- IEEE Transactions on Intelligent Vehicles (2016–2018, 2023)
- IEEE Intelligent Transportation Systems Magazine (2012, 2015, 2018–2020)
- IET Intelligent Transport Systems (2010, 2012–2014, 2017–2020, 2022, 2024)
- IET Science, Measurement & Technology (2018)
- International Journal of Computational Intelligence Systems (2012)
- Journal of Advanced Transportation (2014, 2019)
- Journal of Intelligent Transportation Systems: Technology, Planning, and Operations (2011, 2016, 2019)
- Journal of Traffic and Transportation Engineering (English Edition) (2017)
- Transport (2016)
- Transportmetrica A: Transport Science (2017–2018)
- Transport Reviews (2011, 2014–2015, 2017)
- Transport Policy (2015)
- Transport Problems: an International Scientific Journal (*Problemy Transportu*) (2016)
- Transportation Letters: the International Journal of Transportation Research (2020–2024)
- Transportation Planning and Technology (2023)
- Transportation Research Part B: Methodological (2014–2015, 2017)
- Transportation Research Part C: Emerging Technologies (2008–2016, 2018, 2020–2024)
- Transportation Research Record: Journal of the Transportation Research Board (2018–2020, 2024)
- Transportation Science (2010)
- Transportes (2014–2017, 2019–2023)

Associate Editor, Member of Scientific or International Program Committees

- Congresso Nacional de Ensino e Pesquisa em Transportes (2019–2024)
- Forum on Integrated and Sustainable Transportation Systems (2020)
- IEEE Intelligent Vehicles Symposium (2024)
- IFAC Symposium on Control in Transportation Systems (2018, 2021, 2024)
- International Conference on Vehicle Technology and Intelligent Transport Systems (2018, 2019, 2020, 2021, 2022, 2023, 2024)
- International IEEE Conference on Intelligent Transportation Systems (2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024)
- Symposium on Management of Future Motorway and Urban Traffic Systems (2016, 2018, 2020, 2022, 2024)

Reviewer for Conferences, Symposia and Seminars

- American Control Conference - ACC (2016, 2017, 2023)
- Annual IEEE International Conference on Automation Science and Engineering - CASE (2013, 2015, 2017)
- Congresso Brasileiro de Automática - CBA (2008)
- Congresso Nacional de Pesquisa e Ensino em Transportes - ANPET (2011–2023)
- Congreso Panamericano de Ingeniería de Tránsito, Transporte y Logística - PANAM (2012)
- European Control Conference - ECC (2013–2016, 2018, 2020, 2022)
- IEEE Conference on Decision and Control - CDC (2014–2015, 2020, 2022)
- IEEE Intelligent Vehicles Symposium - IV (2011, 2017, 2021–2024)
- IEEE International Conference on Advanced Intelligent Mechatronics - AIM (2016)

- IEEE Conference on Control Technology and Applications - CCTA (2019, 2020)
- IEEE International Conference on Intelligent Transportation Systems - ITSC (2006–2011, 2013–2023)
- IFAC Conference on Cyber-Physical & Human-Systems - CPHS (2016)
- IFAC Symposium on Control in Transportation Systems - CTS (2012, 2016, 2018, 2021, 2024)
- IFAC Symposium on Robust Control Design - ROCOND (2009)
- International Conference on System Theory, Control and Computing - ICSTCC (2017)
- International Conference on Vehicle Technology and Intelligent Transport Systems - VEHITS (2018–2025)
- Mediterranean Conference on Control and Automation - MED (2013)
- PANAM - Congresso Pan-Americano de Transporte e Logística (2023)
- Rio de Transportes - RDT (2021–2023)
- Seminário Integrado de Ensino, Pesquisa, Extensão e Inovação da Unochapecó - SIEPE (2021)
- Seminário Integrado de Software e Hardware - SEMISH (2008)
- Simpósio Brasileiro de Automação Inteligente - SBAI (2007)
- Transportation Research Board (TRB) Annual Meeting (2012–2024)
- World Congress of the International Federation of Automatic Control (2011, 2014)

Examiner of Research Proposals and Projects

- Federal Institute of Santa Catarina - IFSC (2015–2018)
- Fundação de Amparo à Pesquisa e Inovação do Estado de Santa Catarina - FAPESC (2013, 2017, 2019, 2021, 2023)
- National Council for Scientific and Technological Development - CNPq (2021)
- Netherlands Organisation for Scientific Research - NWO (2018)
- METRANS Transportation Center (2019–2021)
- Ministry of Education of Brazil - MEC (2015)

Examiner of Doctoral Dissertations

- Carlson, R. C.; Bhaya, A.; Ampountolas, K.; Moreno, U. F. Evaluation committee of Elham Ahmadi, Signal-free path-free intersection control: A model predictive contouring control Approach, Automation and Systems Engineering, Federal University of Santa Catarina. (2023)
- Becker, L. B.; Barreto, R.; Bezerra, E. A.; Carlson, R. C. Evaluation committee of Diego Câmara Sales, Abordagem para evolução da arquitetura de sistemas embarcados com uso intenso de sensores e atuadores, Automation and Systems Engineering, Federal University of Santa Catarina. (2021)
- Camponogara, E.; Ehrhardt, M. A. D.; Francisco, J. de B.; Carlson, R. C. Evaluation committee of Caio Merlini Giuliani, Contributions to derivative-free optimization: an exact penalty method and decompositions for distributed control, Automation and Systems Engineering, Federal University of Santa Catarina. (2019)
- Papamichail, I.; Papageorgiou, M.; Nikolos, I.; Delis, A.; Marinakis, Y.; Carlson, R. C.; Roncoli, C. Evaluation committee of Georgia-Roumpini Iordanidou, Traffic flow control on motorways for throughput maximization, School of Production Engineering and Management, Technical University of Crete. (2017)
- Coelho, A. A. R.; Barra Junior, W.; Yoneyama, T.; Simas, H.; Moreno, U. F. Carlson, R. C.; Silveira, H. B. Evaluation committee of Rejane de Barros Araújo, Controladores preditivos filtrados utilizando otimização multiobjetivo para garantir offset-free e robustez, Automation and Systems Engineering, Federal University of Santa Catarina. (2017)

Examiner of Doctoral Qualifying Exams

- Carlson, R. C.; Carvalho, M.; Cunha, A. S. da; Grimstad, B. A. Evaluation committee of João Gabriel Zago, Formal verification of deep ReLU neural networks: algorithms and applications, Automation and Systems Engineering, Federal University of Santa Catarina. (2024)
- Carlson, R. C.; Silva, A. N. R. da; Hoinaski, L. Evaluation committee of Sergio Mauricio Prolo Santos Junior, Exploratory analysis of open access data on travel behavior and mode choice, Automation and Systems Engineering, Federal University of Santa Catarina. (2023)
- Carlson, R. C.; Franzoni, A. M. B.; Soares, S. R. Evaluation committee of Pedro Sidnei Zanchett, Uma proposta de arquitetura de referência de sistemas de suporte à decisão para gerenciamento de desastres naturais, Automation and Systems Engineering, Federal University of Santa Catarina. (2023)
- Carlson, R. C.; Coelho, L. C.; Breinbauer, F. A. D. Evaluation committee of Eduardo Otte Hülse, Multi-route coordinated control of transit systems operations, Automation and Systems Engineering, Federal University of Santa Catarina. (2021)
- Carlson, R. C.; Bezerra, E. A.; Farines, J.-M. A. Evaluation committee of Diego Câmara Sales de Pontes e Sousa, Evolução da arquitetura de sistemas: uma abordagem baseada em dispositivos COTS (2nd round), Automation and Systems Engineering, Federal University of Santa Catarina. (2019)
- Carlson, R. C.; Bezerra, E. A.; Farines, J.-M. A. Evaluation committee of Diego Câmara Sales de Pontes e Sousa, Evolução da arquitetura de sistemas: uma abordagem baseada em dispositivos COTS (1st round), Automation and Systems Engineering, Federal University of Santa Catarina. (2019)
- Carlson, R. C.; Coelho, A. H.; Moreno, U. F. Evaluation committee of Lucas Zimmermann, Controle operacional em tempo real para transporte coletivo urbano, Automation and Systems Engineering, Federal University of Santa Catarina. (2018)
- Carlson, R. C.; Trierweiler, J. O.; Silveira, H. B. Evaluation committee of Marco Aurélio Schmitz de Aguiar, Distributed optimal control of nonlinear dynamic networks, Automation and Systems Engineering, Federal University of Santa Catarina. (2017)
- Carlson, R. C.; Loureiro, A. A. F.; Zeferino, C. A. Evaluation committee of Renê da Rosa Oliveira, Uma abordagem baseada em controle consensual e comunicação confiável para pelotões veiculares, Automation and Systems Engineering, Federal University of Santa Catarina. (2017)
- Stemmer, M. R.; Moreira, M. V. de B.; Leal, A. B.; Carlson, R. C.. Evaluation committee of Rodrigo Szpak, Método de implementação do controle supervisão modular local temporizado em controladores lógicos programáveis, Automation and Systems Engineering, Federal University of Santa Catarina. (2017)
- Carlson, R. C.; Valente, A. M.; Cybis, H. B. B. Evaluation committee of Diego Benites Paradedda, Modelo de quatro etapas: método de atualização de um modelo existente baseado em novas fontes de dados, Automation and Systems Engineering, Federal University of Santa Catarina. (2017)
- Castelan Neto, E. de B.; Carlson, R. C.; Francisco, J. de B.; Almeida, K. C. de. Evaluation committee of Caio Merlini Giuliani, Distributed derivative free optimization, Automation and Systems Engineering, Federal University of Santa Catarina. (2016)

Examiner of Master Theses

- Carlson, R. C.; Moreno, U. F.; Souza, F. A. de. Evaluation committee of Gabriel Wendel Santos da Silva, Coordenação ótima de veículos conectados sob condução automatizada em interseções urbanas com caminhos livres e sem sinalização semafórica automation and systems engineering, Automation and Systems Engineering, Federal University of Santa Catarina. (2022)
- Queiroz, M. H. de; Battistela, S.; Moreno, U. F.; Carlson, R. C.. Evaluation committee of Marcelo Elias Simon, Multi-robots coordination system for urban search and rescue post-disaster assistance based on supervisory control theory, Automation and Systems Engineering, Federal University of Santa Catarina. (2022)

- Carlson, R. C.; Castro, M. M. de Castro; Queiroz, M. H. de; Kraus Jr., W. Evaluation committee of Georgios Joannis Ninos Neto, Análise do gerenciamento de veículos automatizados com exploração livre da área da interseção, Automation and Systems Engineering, Federal University of Santa Catarina. (2021)
- Setti, J. R. A.; Jacques, M. A. P.; Carlson, R. C. Evaluation committee of Renan Favero, Impactos de veículos autônomos na operação de autoestradas através de equivalência veicular, Transportation Engineering, University of São Paulo. (2021)
- Queiroz, M. H. de; Simas, H.; Carlson, R. C.; Cabral, F. G. de O. Evaluation committee of Carolina Rutili de Lima, Controle Supervisório de um Sistema de Patrulhamento Multirrobo com Arquitetura Deliberativa/Reativa, Automation and Systems Engineering, Federal University of Santa Catarina. (2019)
- Carlson, R. C.; Fournier, S.; Seman, L. O.; Camponogara, E. Evaluation committee of Renan Artur Lopes Eccel, Problemas dinâmicos de coleta e entrega com janelas de tempo: análise de instâncias de benchmark, Automation and Systems Engineering, Federal University of Santa Catarina. (2019)
- Roqueiro, N.; Simas, H.; Moreno, U. F. Carlson, R. C. Evaluation committee of Myaghy Augusto Pires Miranda, Metodologia de modelagem matemática automática: um estudo de caso em um veículo individual compacto, Automation and Systems Engineering, Federal University of Santa Catarina. (2019)
- Carlson, R. C.; Silveira, H. B.; Oliveira, M. L. C.; Kraus Jr., W. Evaluation committee of Jéssica Aquino Chaves, Controle do fluxo principal em rodovias por meio de veículos equipados com controle adaptativo de cruzamento, Automation and Systems Engineering, Federal University of Santa Catarina. (2018)
- Carlson, R. C.; Silveira, H. B.; Baldissera, F. L.; Kraus Jr., W. Evaluation committee of Henrique Salvaro Furtado, Evaluation of automated intersection control strategies for automated vehicles, Automation and Systems Engineering, Federal University of Santa Catarina. (2017)
- Carlson, R. C.; Dantas, L. D.; Moreno, U. F.; Coutinho, D. F. Evaluation committee of Vinícius Araujo de Oliveira, Estimador de fila em vias semaforizadas utilizando detector a laço indutivo, Automation and Systems Engineering, Federal University of Santa Catarina. (2017)
- Camponogara, E.; Duarte, A. C.; Coutinho, D. F.; Carlson, R. C. Evaluation committee of Ricardo Santos da Silva, A distributed dual algorithm for distributed MPC of linear dynamic networks, Automation and Systems Engineering, Federal University of Santa Catarina. (2017)
- Silveira, H. B.; Simas, H.; Trofino Neto, A.; Carlson, R. C. Evaluation committee of Leandro Yoshio Morita, Controladores de rastreamento de ângulo de esterço e velocidade de um veículo inclinável de três rodas, Automation and Systems Engineering, Federal University of Santa Catarina. (2016)
- Coelho, A. A. R.; Gomes, F. J.; Simas, H.; Carlson, R. C. Evaluation committee of Edwin Calla Durandal, Avaliação de desempenho e sintonia de controladores livre de modelo: projetos e simulações, Automation and Systems Engineering, Federal University of Santa Catarina. (2016)
- Kraus Jr., W.; Coelho, A. H.; Camponogara, E.; Carlson, R. C. Evaluation committee of Lucas Zimmermann, Controle de intervalos entre ônibus: comparação entre métodos realimentados clássicos e controle preditivo, Automation and Systems Engineering, Federal University of Santa Catarina. (2016)
- Camponogara, E.; Plucenio, A.; Queiroz, M. H. de; Carlson, R. C.; Mayerle, S. F. Evaluation committee of Lauvir Ramos Neto, Modelos quadráticos por partes para otimização da produção de campos de petróleo e gás, Automation and Systems Engineering, Federal University of Santa Catarina. (2016)
- Kraus Jr., W.; Valle, O. T.; Montez, C. B.; Carlson, R. C. Evaluation committee of Ângelo dos Santos Melo, Identificação de passageiros do transporte público usando *smartphones* e *bluetooth*, Automation and Systems Engineering, Federal University of Santa Catarina. (2016)
- Kraus Jr., W.; Koehler, L. A.; Castelan, E. B.; Carlson, R. C. Evaluation committee of Vinícius Berndsen Peccin, Modelagem e estimação de filas para o controle de interseções urbanas semaforizadas, Automation and Systems Engineering, Federal University of Santa Catarina. (2013)
- Kraus Jr., W.; Moreno, U. F.; Koehler, L. A.; Carlson, R. C.; Castelan, E. B. Evaluation committee of Felipe Sanches Gurgel, Localização e estimação de chegada de ônibus urbano utilizando filtros de Kalman, Automation and Systems Engineering, Federal University of Santa Catarina. (2012)

- Camponogara, E.; Kraus Jr, W.; Coelho, A. A. R.; Carlson, R. C.; Oliveira, R. S. Evaluation committee of Felipe Augusto de Souza, Controle preditivo distribuído aplicado ao controle de tráfego veicular urbano, Automation and Systems Engineering, Federal University of Santa Catarina. (2012)

Examiner of Master Qualifying Exams

- Castro Neto, M. M. de; Oliveira Neto, F. M. de; Carlson, R. C. Evaluation committee of Wanderson Hugues de Vasconcelos Pedrosa, Análise do tempo de resposta dos motoristas no desempenho do tráfego de interseções semaforizadas microssimuladas, Post-graduate Program in Transportation Engineering, Federal University of Ceará. (2023)

Examiner of Diploma Theses

- Silveira, H. B.; Pinto, A. S. R.; Carlson, R. C.; Rosa, J. F. R. Evaluation committee of João Victor Assis da Silveira, LVR (Loss-versus-rebalancing) historical data calculation for Blockchain Automated Market Makers (AMMs), Control and Automation Engineering, Federal University of Santa Catarina. (2024)
- Camponogara, E.; Zarzur, K.; Carlson, R. C.; Flesch, R. C. C. Evaluation committee of Gabriel Mendonça de Souza, Discounted Cash Flow Valuation of WEG, Control and Automation Engineering, Federal University of Santa Catarina. (2024)
- Silveira, H. B.; Carlson, R. C.; Queiroz, M. H. de; Fiates, S. Evaluation committee of Giordan Colossi Bianchini, Aplicação de Gamificação em um Sistema MES, Control and Automation Engineering, Federal University of Santa Catarina. (2024)
- Silveira, H. B.; Carlson, R. C.; Becker, L.; Araujo, M. N. Evaluation committee of Gabriel Antonio Camilo Ferrazzo, Construção de back-end de hub de análise de metadados sobre repositórios de dados, Control and Automation Engineering, Federal University of Santa Catarina. (2024)
- Camponogara, E.; Rabelo, R. J.; Carlson, R. C. Evaluation committee of Pedro Germano Cembranel Etges, Desenvolvimento de um gêmeo digital para a planta MPS 4.0 do Laboratório de Automação Industrial da UFSC, Control and Automation Engineering, Federal University of Santa Catarina. (2024)
- Lopes, S. B.; Carlson, R. C.; Benedecti, R. Evaluation committee of Murilo Colin da Silveira, Desenvolvimento de um módulo em Alteryx com base em dados de modelo de macrosimulação EMME para análise de alternativas em vias australianas, Transportation Engineering and Logistic, Federal University of Santa Catarina. (2023)
- Camponogara, E.; Mello, R. dos S.; Carlson, R. C. Evaluation committee of Fernando Leite de Sousa, Criação de aplicativo para uma comunidade digital de futebol: Engenharia de Automação aplicada às novas formas de consumir o esporte mais popular do Brasil, Control and Automation Engineering, Federal University of Santa Catarina. (2023)
- Camponogara, E.; Lima, P. M.; Carlson, R. C.; Schiller, S. Evaluation committee of Maurici Meneghetti de Souza, Evaluation and enhancement of a new siemens data acquisition using a time series technologies approach, Control and Automation Engineering, Federal University of Santa Catarina. (2023)
- Camponogara, E.; Carlson, R. C.; Costa Filho; M. V. A. da; Jacobsen, M. S. Evaluation committee of Miguel Hellmann Preuss, Software de automação de casos de testes para sistemas de controle de geração de energia, Control and Automation Engineering, Federal University of Santa Catarina. (2023)
- Camponogara, E.; Carlson, R. C.; Lima, P. M. M.; Araujo, M. N. Evaluation committee of Daniel Franzoni, Migração para nuvem de ferramenta de auxílio à tomada de decisão em operações de compra e venda de ativos utilizando Fast API e Airflow, Control and Automation Engineering, Federal University of Santa Catarina. (2023)
- Camponogara, E.; Reis, J. P. dos; Carlson, R. C.; Oro, S. R. Evaluation committee of Gustavo Trentin, Desenvolvimento de um módulo no aplicativo DynaPredict para realização de espectral simultânea, Control and Automation Engineering, Federal University of Santa Catarina. (2023)
- Camponogara, E.; Carlson, R. C.; Narciso Filho, P. A. L. Evaluation committee of Leonardo Nunes Brito, Implementação de algoritmo de predição de disponibilidade e performance aplicado à Indústria 4.0, Control and Automation Engineering, Federal University of Santa Catarina. (2022)

- Hoinaski, L.; Chaffe, P. L. B.; Carlson, R. C. Evaluation committee of Matheus Vicente Duarte, Modelagem de dispersão de NO₂ proveniente de emissões veiculares na região da Grande Florianópolis, Sanitary and Environmental Engineering, Federal University of Santa Catarina. (2022)
- Oliveira, M. De L. C. de; Kirchner, S.; Kraus Junior, W.; Carlson, R. C. Evaluation committee of Lucas Eduardo Oliveira Cândido, Desenvolvimento do firmware de uma extensão de medição de energia usando TC, Control and Automation Engineering, Federal University of Santa Catarina. (2021)
- Baldissera, F. L.; Hollerweger, M. M.; R. C. Carlson; Sousa, D. C; S. de P. e. Evaluation committee of Thales Porto Mendes, Sistema de gestão de zonas de autosalvamento no entorno de barragens de hidroelétricas, Control and Automation Engineering, Federal University of Santa Catarina. (2021)
- Baldissera, F. L.; Dias, P. A. C.; Rabelo, R. J.; R. C. Carlson. Evaluation committee of Henrique Costa e Silva, Solução para classificação de contas e seleção de gerentes de atendimento para serviço de Customer Success, Control and Automation Engineering, Federal University of Santa Catarina. (2021)
- Baldissera, F. L.; Weber, F.; Carlson, R. C.; Silveira, H. B. Evaluation committee of Matheus Barreto Nunes de Aguiar, Desenvolvimento de softwares para o ecossistema do Turismo Brasileiro, Control and Automation Engineering, Federal University of Santa Catarina. (2020)
- Oliveira, M. De L. C. de; Simas, H.; Pinto, T. L. F. da C.; Carlson, R. C.. Evaluation committee of Daniel Juchem Regner, Camera gimbal control system to track an object detected on image, Control and Automation Engineering, Federal University of Santa Catarina. (2020)
- Silveira, H. B.; Neves, P. H. F.; Carlson, R. C.; Andrade, G. A. G.; Menezes, V. C.; Santos, M. R. M. dos. Evaluation committee of Ricardo Carvalho Frantz do Amaral, Planejamento, desenvolvimento e implementação de API para aplicativo para supervisão de escolas de música, Control and Automation Engineering, Federal University of Santa Catarina. (2018)
- Rabelo, R. J.; Carlson, R. C.; Souza, G. M. de; Heizen, J. H. R. Evaluation committee of Matheus Alberto Ambrosi, Desenvolvimento de uma ferramenta de gestão de relacionamento com o cliente para pós-venda, Control and Automation Engineering, Federal University of Santa Catarina. (2018)
- Rabelo, R. J.; Costa, O. G.; Carlson, R. C.; Damke, J. C. P.; Ambrosi, M. A. Evaluation committee of João Henrique Renon Heinzen, Desenvolvimento de um sistema para avaliar o desempenho de colaboradores para uma diretoria de recursos humanos, Control and Automation Engineering, Federal University of Santa Catarina. (2018)
- Rabelo, R. J.; Pelegrino, L.; Carlson, R. C.; Amaral, C. J.; Felipini, H. E.; Andreus, P. P. Evaluation committee of Leonardo Schevz de Werk, Desenvolvimento de plataforma online de doações baseada em uma DDD, Event Sourcing e CQRS, Control and Automation Engineering, Federal University of Santa Catarina. (2018)
- Silveira, H. B.; Camponogara, E.; Carlson, R. C.; Simas, H.; Galvani, W. de M.; Bortolozzo Junior, W. A. Evaluation committee of Angelo Frigeri Araujo, Congestion mitigation in freeways using optimal control, Control and Automation Engineering, Federal University of Santa Catarina. (2018)
- Hoinaski, L.; Franco, D.; Carlson, R. C.. Evaluation committee of Tiago Barros Meirelles, *Title?*, Sanitary and Environmental Engineering, Federal University of Santa Catarina. (2017)
- Rico, J. E. N.; Kraus Junior, W.; Carlson, R. C.; Moreno, U. F.; Morato, M. M.; Aldeyturriaga, R. de O. G. Evaluation committee of Augusto José Toso, Imputação da ocupação de vias em redes de tráfego urbano por meio de máquinas de vetores de suporte por mínimos quadrados, Control and Automation Engineering, Federal University of Santa Catarina. (2017)
- Silveira, H. B.; Lóssio, R. G.; Carlson, R. C.; Silva, F. L. dos S.; Meurer, R. S. Evaluation committee of Luana de Oliveira Pereira, Desenvolvimento de uma ferramenta para automação de relatórios de agência de marketing, Control and Automation Engineering, Federal University of Santa Catarina. (2017)
- Berkenbrock, G. R.; Carlson, R. C.; Jaskowiak, P. A. Evaluation committee of Camila Feliciano, Indicadores para avaliação de medidas de desempenho da rede semaforica de Joinville através de simulação, Transportation Engineering and Logistics, Federal University of Santa Catarina. (2016)
- Berkenbrock, G. R.; Carlson, R. C.; Isler, C. A. Evaluation committee of Ana Paula Nunes Duarte, Análise da confiabilidade do tempo de viagem do transporte público por ônibus em Joinville/SC através de simulação, Transportation Engineering and Logistics, Federal University of Santa Catarina. (2016)

- Normey-Rico, J. E.; Cordeiro, A.; Bezerra, E. A.; Carlson, R. C.; Schüler, R. H.; Resmini, T. N. Evaluation committee of Antonio Adalberto Duarte Junior, Desenvolvimento de aplicação para controle de dispositivos via rádio frequência, Control and Automation Engineering, Federal University of Santa Catarina. (2016)
- Normey-Rico, J. E.; Costa, D. de S.; Becker, L. B.; Carlson, R. C.; Silva, F. O. da; Duarte Junior, A. A. Evaluation committee of Tiago Nunes Resmini, Sistema para avaliação de indicadores voltado para times de desenvolvimento de produtos de software, Control and Automation Engineering, Federal University of Santa Catarina. (2016)
- Silveira, H. B.; Silva, C. M.; Becker, L. B.; Carlson, R. C.; Borges, R. B. G.; Jara, V. R. S. Evaluation committee of Lucas Caldeira de Oliveira, Desenvolvimento da lógica programável de um receptor de rádio, Control and Automation Engineering, Federal University of Santa Catarina. (2016)
- Silveira, H. B.; Krawczyk, V.; Becker, L. B.; Carlson, R. C.; Oliveira, L. C.; Borges, R. B. G. Evaluation committee of Tatiana Beber Kassick, Development of an embedded system for a platelet illumination device, Control and Automation Engineering, Federal University of Santa Catarina. (2016)
- Carlson, R. C.; Isler, C. A.; Fernandes, C. W. N.; Lopes, S. B. Evaluation committee of Renan Artur Lopes Eccel, Prioridade semafórica para transporte coletivo por ônibus: o caso dos corredores centro-norte da cidade de Joinville, Transportation Engineering and Logistics, Federal University of Santa Catarina. (2015)
- Silveira, H. B.; Trofino Neto, A.; Carlson, R. C.; Zambaldi, L. F.; Peres, G. Evaluation committee of Martin Vincent Bloedorn, Prototype of a low-cost open source prosthetic hand, Control and Automation Engineering, Federal University of Santa Catarina. (2015)
- Flesch, R. C. C.; Carlson, R. C.; Weihmann, L. Evaluation committee of Josue Basen Pereira, Um estudo da mobilidade da cidade de Joinville baseado no índice de mobilidade urbana sustentável, Interdisciplinary in Mobility, Federal University of Santa Catarina. (2013)
- Flesch, R. C. C.; Carlson, R. C.; Weihmann, L. Evaluation committee of William Moldenhauer de Jesus, Uso de redes neurais artificiais autorregressivas para estimar a capacidade de refrigeração de compressores através da estimação de dados de regime transiente, Interdisciplinary in Mobility, Federal University of Santa Catarina. (2013)

Examiner of Candidates to Faculty Positions

- Pedreira Júnior, J. U.; Silva, P. C. M. da; Carlson, R. C. Traffic Engineering, Federal University of Bahia. (2024)
- Hübner, J. F.; Bhaya, A.; Carlson, R. C. Methodology and Computing Techniques, Federal University of Santa Catarina. (2019)
- Setti, J. R.; Kraus Jr., W.; Carlson, R. C. Transportation Engineering/Traffic Engineering, Federal University of Santa Catarina. (2015)
- Casali, R. M.; Carlson, R. C.; Loureiro, K. C. Transportation Engineering/Transport Operations, Federal University of Santa Catarina. (2014)

Examiner of Candidates to Temporary Teaching Positions

- Carlson, R. C.; Farines, J.-M.; Koliver, C. Electrical engineering/Control of electronic processes, feedback, Federal University of Santa Catarina. (2018)
- Flesch, R. C. C.; Roqueiro, N.; Carlson, R. C. Electrical engineering/Control of electronic processes, feedback, Federal University of Santa Catarina. (2016)
- Carlson, R. C.; Souza, C. B. P.; Casali, R. M. Transportation and Logistics, Federal University of Santa Catarina. (2013)
- Flesch, R. C. C.; Oliveira Filho, M. E.; Carlson, R. C. Hardware and embedded systems, Federal University of Santa Catarina. (2013b)
- Souza, C. B. P.; Taglialenha, S. L. S.; Carlson, R. C. Transportation Engineering/Transport Economy, Federal University of Santa Catarina. (2013)

- Oliveira Filho, M. E.; Larico, H. R. E.; Carlson, R. C. Electrical Engineering/Circuits Theory, Federal University of Santa Catarina. (2013)
- Souza, C. B. P.; Carlson, R. C.; Barra, B. S. Transportation Engineering/Transport Operations, Federal University of Santa Catarina. (2013)
- Flesch, R. C. C.; Oliveira Filho, M. E.; Carlson, R. C. Hardware and embedded systems, Federal University of Santa Catarina. (2013a)

SUPERVISIONS

Supervisor of Postdoctoral Researchers

- Eduardo Rauh Müller. Controle cooperativo de veículos automatizados em cruzamentos. Automation and Systems Engineering, Federal University of Santa Catarina. (2018–2019)

Supervisor of Doctoral Dissertations

- Elham Ahmadi. Signal-free path-free intersection control: A model predictive contouring control approach. Automation and Systems Engineering, Federal University of Santa Catarina. Funded by the CAPES Foundation, Ministry of Education of Brazil. (2023)
- Lucas Zimmermann. Otimização da trajetória por retenção em estações, controle semafórico e de velocidade para regularização de intervalos entre ônibus. Automation and Systems Engineering, Federal University of Santa Catarina. Funded by The National Council for Scientific and Technological Development (CNPq). Co-supervisor. (2023)
- Diego Benites Paradedá. Método probabilístico para estimativa de embarques de passageiros em transporte coletivo por ônibus utilizando dados de sinalização Wi-Fi, Automation and Systems Engineering, Federal University of Santa Catarina. Funded by The National Council for Scientific and Technological Development (CNPq). Co-supervisor. (2020)
- Eduardo Rauh Müller. Optimal arrival time scheduling of automated vehicles at intersections, Automation and Systems Engineering, Federal University of Santa Catarina. Funded by The National Council for Scientific and Technological Development (CNPq). (2018)

Supervisor of Master Theses

- Roberto José Willoughby Maya. Frenet Frames for Vehicle Motion Planning Coordination at Lane-Free Freeways. Automation and systems engineering, Federal University of Santa Catarina. Funded by The National Council for Scientific and Technological Development (CNPq) (...)
- Gabriel Wendel Santos da Silva. Coordenação ótima de veículos conectados sob condução automatizada em interseções urbanas com caminhos livres e sem sinalização semafórica. Automation and systems engineering, Federal University of Santa Catarina. Funded by The National Council for Scientific and Technological Development (CNPq) (2022)
- Luiz Felipe Curtarelli. Análise do consumo de combustível e da capacidade viária para a condução ecológica em microsimulação de tráfego. Automation and Systems Engineering, Federal University of Santa Catarina. Co-supervisor. (2021)
- Georgios Joannis Ninos Neto. Análise do gerenciamento de veículos automatizados com exploração livre da área da interseção. Automation and Systems Engineering, Federal University of Santa Catarina. Funded by The National Council for Scientific and Technological Development (CNPq) (2021)
- Lucas Franco Lima. Controle realimentado de intervalo entre ônibus com ganho variável de acordo com o carregamento. Automation and Systems Engineering, Federal University of Santa Catarina. Funded by the CAPES Foundation, Ministry of Education of Brazil. Co-supervisor. (2020)
- Renan Artur Lopes Eccel. Problemas dinâmicos de coleta e entrega com janelas de tempo: análise de instâncias de benchmark. Automation and Systems Engineering, Federal University of Santa Catarina. Funded by the CAPES Foundation, Ministry of Education of Brazil. (2019)

- Jéssica Aquino Chaves. Controle do fluxo principal em rodovias por meio de veículos cooperativos equipados com controle adaptativo de cruzeiro, Automation and Systems Engineering, Federal University of Santa Catarina. Funded by the CAPES Foundation, Ministry of Education of Brazil. (2018)
- Henrique Salvaro Furtado. Evaluation of automated intersection control strategies for automated vehicles, Automation and Systems Engineering, Federal University of Santa Catarina. Funded by the CAPES Foundation, Ministry of Education of Brazil. (2017)
- Vinícius Araújo de Oliveira. Estimador de fila em vias semaforizadas utilizando detector a laço indutivo. Automation and Systems Engineering, Federal University of Santa Catarina. Funded by the CAPES Foundation, Ministry of Education of Brazil. (2017)
- Arthur Theodoro Marinho. Calibração de modelos de consumo de combustível para microssimulação de tráfego com dados coletados via OBD. Automation and Systems Engineering, Federal University of Santa Catarina. Funded by the CAPES Foundation, Ministry of Education of Brazil. (2016)
- Emmanuel Katende Dinanga. Multi agent systems approach for emergency response process management, Automation and Systems Engineering, Federal University of Santa Catarina. Funded by the CAPES Foundation, Ministry of Education of Brazil. Co-supervisor. (2016)
- Diego Benites Paradedá. Implantação de faixas exclusivas para ônibus: efeito da troca modal no tráfego. Automation and Systems Engineering, Federal University of Santa Catarina. Funded by the CAPES Foundation, Ministry of Education of Brazil. Co-supervisor. (2015)
- Eduardo Rauh Müller. Estudo por Microssimulação do Controle de Fluxo Principal em Rodovias através de Limite de Velocidade Variável. Automation and Systems Engineering, Federal University of Santa Catarina. Funded by The National Council for Scientific and Technological Development (CNPq). (2013)

Supervisor of Diploma Theses

- Bruno Tavares dos Anjos. Statistical analysis and optimization of CNC machining processes: Identifying weak spots through high-frequency data analysis, gemineers GmbH, , Control and Automation Engineering, Federal University of Santa Catarina. Supervisor. (2024?)
- Gabryel Lessa Bernardes. Módulo para gerenciamento de dispositivos em larga escala no sistema de segurança eletrônica em agências bancárias, Intelbras, Control and Automation Engineering, Federal University of Santa Catarina. Supervisor. (2024?)
- Rafael Minatto Saucedo. Controle de fluxo de tráfego em rodovias por limites de velocidade variáveis com limite inferior alto, Federal University of Santa Catarina. Supervisor. (2024?)
- Gabriel Mendonça de Souza. Discounted cash flow valuation of WEG, Seven Pounds Asset Management, Control and Automation Engineering, Federal University of Santa Catarina. Supervisor. (2024)
- Giordan Colossi Bianchini. Aplicação de gameificação em um sistema MES, HarboR, Control and Automation Engineering, Federal University of Santa Catarina. (2024)
- Gabriel Antonio Camilo Ferrazzo. Construção de back-end de hub de análise de metadados sobre repositórios de dados, Radix, Control and Automation Engineering, Federal University of Santa Catarina. (2024)
- Miguel Hellmann Preuss. Software de automação de casos de testes para sistemas de controle de geração de energia, REIVAX Automação e Controle, Control and Automation Engineering, Federal University of Santa Catarina. (2023)
- Daniel Franzoni. Migração para nuvem de ferramenta de auxílio à tomada de decisão em operações de compra e venda de ativos utilizando Fast API e Airflow, Radix Engenharia e Software, Control and Automation Engineering, Federal University of Santa Catarina. (2023)
- Gustavo Trentin. Desenvolvimento de um módulo no aplicativo DynaPredict para realização de espectral simultânea. Control and Automation Engineering, Federal University of Santa Catarina. (2023)
- Thales Porto Mendes. Sistema de gestão de zonas de autosalvamento no entorno de barragens de hidroelétricas. Control and Automation Engineering, Federal University of Santa Catarina. (2021)
- Matheus Barreto Nunes de Aguiar. Desenvolvimento de softwares para o ecossistema do Turismo Brasileiro. Control and Automation Engineering, Federal University of Santa Catarina. (2020)

- Thuany Karoline Stuart. Conception and development of a graph-based similarity algorithm for record matching in a Master Data Management application. Control and Automation Engineering, Federal University of Santa Catarina. (2020)
- Ricardo Carvalho Frantz do Amaral. Planejamento, desenvolvimento e implementação de API para aplicativo para supervisão de escolas de música. Control and Automation Engineering, Federal University of Santa Catarina. (2018)
- Leonardo Schevz de Werk. Desenvolvimento de plataforma online de doações baseada em uma DDD, Event Sourcing e CQRS. Control and Automation Engineering, Federal University of Santa Catarina. (2018)
- Angelo Frigeri Araujo. Congestion mitigation in freeways using optimal control. Control and Automation Engineering, Federal University of Santa Catarina. (2018)
- Augusto José Toso. Imputação da ocupação de vias em redes de tráfego urbano por meio de máquinas de vetores de suporte por mínimos quadrados. Control and Automation Engineering, Federal University of Santa Catarina. (2017)
- Renan Artur Lopes Eccel. Prioridade semaforica para transporte coletivo por ônibus: o caso dos corredores centro-norte da cidade de Joinville. Transportation Engineering and Logistics, Federal University of Santa Catarina. (2015)

Supervisor of Scientific Education

- Rafael Minatto Saucedo. Implementação no Polaris de estratégias de controle de tráfego. Control and Automation Engineering, Federal University of Santa Catarina. Funded by The National Council for Scientific and Technological Development (CNPq). (Sep/2023–Aug/2024)
- Maria Eduarda Justus Franco da Luz. Estratégias de controle de tráfego para redução de emissões considerando dispersão atmosférica. Control and Automation Engineering, Federal University of Santa Catarina. Funded by The National Council for Scientific and Technological Development (CNPq). (Sep/2023–Aug/2024)
- Pedro Arthur Bonadio Muracchini. Modelagem mesocópica e controle de tráfego com polaris. Control and Automation Engineering, Federal University of Santa Catarina. Funded by The National Council for Scientific and Technological Development (CNPq). (Sep/2022–Aug/2023)
- Eduardo Rosa de Lima. Prevenção de colisão de veículos sob condução automatizada em redes de tráfego. Control and Automation Engineering, Federal University of Santa Catarina. Funded by The National Council for Scientific and Technological Development (CNPq). (Sep/2022–Aug/2023)
- Eduardo Rosa de Lima. Combination of traffic-responsive urban control with perimeter and boundary control: Control in multiple regions. Control and Automation Engineering, Federal University of Santa Catarina. Funded by The National Council for Scientific and Technological Development (CNPq). (Jan/2022–Aug/2022)
- Rafael Minatto Saucedo. Combination of traffic-responsive urban control with perimeter and boundary control: Control in a single-region. Control and Automation Engineering, Federal University of Santa Catarina. Funded by The National Council for Scientific and Technological Development (CNPq). (Sep/2021–Aug/2022)
- Rafael Minatto Saucedo. Otimização de parâmetros na estratégia de controle TUC em malhas viárias de larga escala. Control and Automation Engineering, Federal University of Santa Catarina. Funded by The National Council for Scientific and Technological Development (CNPq). (Sep/2020–Aug/2021)
- Pedro Henrique Cândido Lenzi. Sintonia automática de controladores de tráfego. Control and Automation Engineering, Federal University of Santa Catarina. Funded by The National Council for Scientific and Technological Development (CNPq). (Sep/2020–Aug/2021)
- Helena Borges Daré. Controle de veículos automatizados em interseções reconfiguráveis. Control and Automation Engineering, Federal University of Santa Catarina. Funded by The National Council for Scientific and Technological Development (CNPq). (Aug/2019–Nov/2019)
- Joana Alves dos Santos. Verificação formal de estratégias de controle de interseções com veículos automatizados. Control and Automation Engineering, Federal University of Santa Catarina. Funded by The National Council for Scientific and Technological Development (CNPq). (Aug/2018–Jul/2019)

- Joana Alves dos Santos. Comparação de estratégias de control de tráfego de veículos automatizados. Control and Automation Engineering, Federal University of Santa Catarina. Funded by The National Council for Scientific and Technological Development (CNPq). (Aug/2017–Jul/2018)
- Gabriel Jurask. Efeitos do controle de tráfego urbano em tempo real no diagrama fundamental macroscópico. Mechatronics Engineering, Federal University of Santa Catarina. Funded by The National Council for Scientific and Technological Development (CNPq). (Aug/2013–Jul/2014)
- Sabrina Bonfanti. Projeto de tecnologia e mobilidade para incentivar jovens talentos - sistemas urbanos: transporte de pessoas. Escola Estadual Básica Professora Jandira D'Ávila (Secondary School). Funded by The National Council for Scientific and Technological Development (CNPq). (Apr/2013–Jan/2014)

Supervisor of Internships

- Natan Kanitz. Intern at Arvus Tecnologia Ltda. (Apr/2024–?)
- Julia Gualdi Schlichting. Intern at Fraunhofer-Einrichtung zur Förderung der angewandten Forschung. (Apr/2024–?)
- Bruno Tavares dos Anjos. Intern at Gemineers GmbH. (Mar/2024–?)
- André Padilha Alves. Intern at AAWZ Soluções Tecnológicas Ltda. (Mar/2024–May/2024)
- Giordan Colossi Bianchini. Intern at Harbor Informática Industrial Ltda. (Oct/2023–Feb/2024)
- Gabriel Mendonça de Souza. Intern at Seven Pounds Asset Management Ltda. (Sep/2023–Mar/2024)
- Miguel Hellmann Preuss. Intern at Reivax S/A Automação e Controle. (Aug/2023–Dec/2023)
- Rafael Minatto Saucedo. Intern at Department of Automation and Systems, Federal University of Santa Catarina. (Aug/2023–Dec/2023)
- Pedro Arthur Bonadio Muracchini. Intern at Dynamox SA. (Aug/2023–Feb/2023)
- Natan Kanitz. Intern at Arvus Tecnologia Ltda. (Jul/2023–Jan/2024)
- Marjori Goncalves Lins. Intern at SAP Brasil Ltda. (Jul/2023–Jan/2024)
- João Paulo Biffi Miguel. Intern at Inventa App Ltda. (Apr/2023–Oct/2023)
- Giordan Colossi Bianchini. Intern at Harbor Informática Industrial Ltda. (Apr/2023–Oct/2023)
- Fernando Bandeira de Mello Mattos. Intern at Gemineers GmbH. (Apr/2023–Feb/2024)
- Miguel Hellmann Preuss. Intern at Reivax S/A Automação e Controle. (Mar/2023–Aug/2023)
- Fernando Kendy Marciniak Arake. Intern at Fraunhofer Institute for Production Technology IPT. (Jan/2023–Jul/2023)
- Gabriel Antonio Camilo Ferrazzo. Intern at Radix Engenharia e Desenvolvimento de Software Ltda. (Jan/2023–Feb/2024)
- Rafael Minatto Saucedo. Intern at Protectmaster Serviços de Eletricidade Ltda. (Nov/2022–Apr/2023)
- Valdecir Hoffman. Intern at Fundação Certi. (Oct/2022–Apr/2023)
- Natan Kanitz. Intern at Arvus Tecnologia Ltda. (Oct/2022–Mar/2023)
- Giordan Colossi Bianchini. Intern at Harbor Informática Industrial Ltda. (Oct/2022–Apr/2023)
- Miguel Hellman Preuss. Intern at Reivax S/A Automação e Controle. (Sep/2022–Mar/2023)
- Cesar Henrique Campos Comelli. Intern at Dynamox SA. (Sep/2022–Dec/2022)
- Matheus Imlau. Intern at Intexfy Desenvolvimento de Programas de Computador em Inteligência de Mercado Ltda. (Aug/2022–Jan/2023)
- André Luiz Bressan Ayres Lopes. Intern at Intexfy Desenvolvimento de Programas de Computador em Inteligência de Mercado Ltda. (Jul/2022–Apr/2022)
- Gabriel Mendonça de Souza. Intern at Engie Brasil Energia S.A. (May/2022–Nov/2022)
- Fernando Bandeira de Mello Mattos. Intern at Fundação Certi. (Apr/2022–Feb/2023)
- Rafael dos Santos Peixoto. Intern at Navi Capital - Administradora e Gestora de Recursos Financeiros Ltda. (Jan/2022–Feb/2022)
- Davi Rocha Cardoso. Intern at Kyros Consultoria Ltda. (Oct/2021–Apr/2022)

- Jose Leite da Cruz. Intern at Valin Tecnologia Ltda. (Jul/2021–Jan/2022)
- Vitor Werle Rempel. Intern at Arvus Tecnologia Ltda. (Jul/2021–Dec/2021)
- Cleber Vinicius Edwirges dos Santos. Intern at CSG Brazil Tecnologia Ltda. (Dec/2020–May/2021)
- Daniel Chagas da Silva Freitas. Intern at Aurum Softmatic Ltda. (Nov/2020–Nov/2021)
- Davi Rocha Cardoso. Intern at Kyros Consultoria Ltda. (Oct/2020–Oct/2021)
- Leonardo de Souza Chaves. Intern at Intexfy Desenvolvimento de Programas de Computador em Inteligência de Mercado Ltda. (Sep/2020–Sep/2022)
- Matheus da Silva Porto. Intern at Padilha Desenvolvimento e Tecnologia LTDA. (Sep/2020–Sep/2021)
- Thales Porto Mendes. Intern at Kartado Tecnologia Ltda. (Jul/2020–Feb/2021)
- Natan Kanitz. Intern at Kartado Tecnologia Ltda. (Jun/2020–Dec/2020)
- Natan Kanitz. Intern at Kartado Tecnologia Ltda. (Dec/2019–Jun/2020)
- Matheus da Silva Porto. Intern at Dayback Energia Estratégica Ltda (Nov/2019–Feb/2020)
- Bruno Butzke de Souza. Intern at Fundação Certi. (Nov/2019–Feb/2020)
- Matheus Barreto Nunes de Aguiar. Inter at Tamires Tavares Pacheco. (Aug/2019–Dec/2019)
- Leonardo Carradore. Intern at Aurum Softmatic Ltda. (Aug/2019–Apr/2020)
- Roger Amaro Almeida. Intern at Granter Tecnologia EIRELI. (Aug/2019–Dec/2019)
- Luiz Felipe Silva Vale. Intern at Baltus Sistemas Ltda. (Jul/2019–Jan/2020)
- Natan Kanitz. Intern at Kartado Tecnologia Ltda. (Jun/2019–Nov/2019)
- Sher Gallo Netto. Inter at Department of Automation and Systems, Federal University of Santa Catarina. (May/2019–Jun/2019)
- Luciana Gislanda do Nascimento Martins. Inter at Department of Automation and Systems, Federal University of Santa Catarina. (May/2019–Jun/2019)
- Leonardo Leite. Inter at the Department of Sanitary and Environmental, Federal University of Santa Catarina. (Apr/2019–Jul/2019)
- Leonardo Carradore. Intern at Aurum Softmatic Ltda. (Apr/2019–Aug/2020)
- Lorenzo Pitombo Vella. Intern at SIATT - Engenharia, Indústria e Comércio LTDA. (Feb/2019–Mar/2019)
- Pedro Kretzschmar. Intern at Fundação Certi. (Sep/2018–Sep/2020)
- Natan Kanitz. Intern at Kartado Tecnologia Ltda. (Sep/2018–Mar/2019)
- Roger Amaro Almeida. Intern at Khor Tecnologia da Informação Ltda. (Feb/2019–August/2019)
- Bianca da Silva Britto. Itern at Z Tech Solutions Ltda. (Aug/2018–Aug/2019)
- Matheus Paulino Silva. Intern at Valin Tecnologia Ltda. (Aug/2018–Jun/2019)
- Gabriel Batistell. Intern at Valin Tecnologia Ltda. (Jul/2018–Jun/2019)
- Bruno Butzke de Souza. Intern at Fundação CERTI. (May/2018–Nov/2019)
- Ricardo Carvalho Frantz do Amaral. Intern at Monolit Tecnologia LTDA - ME. (Mar/2018–Jul/2018)
- Vanderlei Munhoz Pereira Filho. IBM Brasil - Indústria, Máquinas e Serviços Ltda. (Feb/2018–Aug/2018)
- Thuany Karoline Stuart. Intern at Philips Lighting DPL. (Oct/2017–Jul/2018)
- Leonardo Schevz de Werk. Inter at Doare Serviços Financeiros Ltda - Me. (Sep/2017–Dec/2017)
- Angelo Frigeri Araujo. Intern at theDepartment of Automation and Systems, Federal University of Santa Catarina. (Aug/2017–Dec/2017)
- Bruno Butzke De Souza. Intern at the Santa Catarina State University. (Apr/2017–May/2018)
- Augusto José Toso. Intern at EMBRAER - Empresa Brasileira de Aeronáutica S.A. (Feb/2017–Dec/2017)
- Augusto José Toso. Intern at the Department of Automation and Systems, Federal University of Santa Catarina. (Aug/2016–Dec/2016)

- Mônica Spínola Felix. Intern at the Department of Automation and Systems, Federal University of Santa Catarina. (Mar/2016–Jul/2016)
- Lucas Zimmermann. Intern at the Department of Automation and Systems, Federal University of Santa Catarina. (Nov/2015–Jun/2016)
- Luana de Oliveira Pereira. Intern at the Department of Automation and Systems, Federal University of Santa Catarina. (Aug/2015–Apr/2016)
- Felipe Rossi Trojan. Intern at IPPUJ Foundation, Municipality of Joinville. (Jun/2013–May/2015)
- Rodrigo Shigueiro Siroma. Intern at the Traffic Division, Municipality of Joinville. (Jul/2014–Jan/2015)
- Nathan Filipe Hoepers. Intern at IPPUJ Foundation, Municipality of Joinville. (Jun/2013–Dec/2014)

Supervisor of Tutors

- Miguel Castilho Silva. Tutor for Foundations of Information Structure - DAS 5102. Federal University of Santa Catarina. (2024/1)
- Joao Gabriel Almeida Ferreira. Tutor for Foundations of Information Structure - DAS 5102. Federal University of Santa Catarina. (2023/2)
- Tainá Veloso Pandolfi. Tutor for Foundations of Information Structure - DAS 5102. Federal University of Santa Catarina. (2022/2–2023/1)
- Thomás Thum Silveira Schmidt. Tutor for Foundations of Information Structure - DAS 5102. Federal University of Santa Catarina. (2021/2–2022/1)
- Ícaro Bedôr Jardim Bastos de Paula Cavalcante. Tutor for Foundations of Information Structure - DAS 5102. Federal University of Santa Catarina. (2020/2–2021/1)
- Gabriel Paiva de Oliveira. Tutor for Foundations of Information Structure - DAS 5102. Federal University of Santa Catarina. (2019/1–2019/2)
- Fabiano Junior Maia Manschein. Tutor for Foundations of Information Structure - DAS 5102. Federal University of Santa Catarina. (2018/1–2018/2)
- Cristian Assis Rocha Yamamoto. Tutor for Foundations of Information Structure - DAS 5102. Federal University of Santa Catarina. (2017/2)
- Vinícius Heck Peiter. Tutor for Foundations of Information Structure - DAS 5102. Federal University of Santa Catarina. (2017/1)
- Antônio Sandri Silvestre. Tutor for Foundations of Information Structure - DAS 5102. Federal University of Santa Catarina. (2016/2)
- Alex Amadeu Cani. Tutor for Foundations of Information Structure - DAS 5102. Federal University of Santa Catarina. (2016/1)
- Rafael Kiemo Pfau Santos. Tutor for Introduction to Control Systems - EMB 5111. Federal University of Santa Catarina. (2014/1–2014/2)
- Hugo Lückmann Vidal. Tutor for Introduction to Control Systems - EMB 5111. Federal University of Santa Catarina. (2013/2)
- Gabriel Jurask. Tutor for Introduction to Computer Programming - EMB 5013. Federal University of Santa Catarina. (2012/2)

EVENTS

Organization of Conferences

- Carlson, R. C.; Camponogara, E.; Cavion, R.; Lobo, E.; Chaves, G. de L. D.; Lopes, S. B.; Pfützenreuter, A. H; Souza, J. C. 38^o ANPET - Congresso da Associação Nacional de Pesquisa e Ensino em Transportes. (2024)
- Carlson, R. C.; Kraus Jr, W.; Lopes, S. B.; Cavion, R.; Souza, J. C.; Hoinaski, L.; Meyer, B. 33^o ANPET - Congresso da Associação Nacional de Pesquisa e Ensino em Transportes. (2019)

- Dias, A.; Lezana, A. G. R.; Fernandes, C. W. N.; Pinto, C. R. S. de C.; Ferreira, C. V.; Recouvreux, D. O. S.; Cardozo, E.; Calil, L. F. P.; Casali, R. M.; Carlson, R. C. XXVI ANPET - Congresso Nacional de Pesquisa e Ensino em Transportes. (2012)

Participation in Conferences, Symposia, Workshops and Seminars

- 37^o ANPET - Congresso de Pesquisa e Ensino em Transportes, Santos, São Paulo, Brasil. Presentation of papers **A20** and **C50**. (2023)
- Research to Business Brazil-Italy, Online/São Paulo. Presentation of the project “Distributed Optimization for Cooperative Machine Learning in Complex Networks”. (2022)
- 36^o ANPET - Congresso de Pesquisa e Ensino em Transportes, Fortaleza, Ceará, Brasil. Presentation of papers **C48** and **C49**. (2022)
- 35^o ANPET - Congresso de Pesquisa e Ensino em Transportes, 100% Virtual, Brasil. Presentation of paper **C45**. (2021)
- 34^o ANPET - Congresso de Pesquisa e Ensino em Transportes, 100% Digital, Brasil. (2020)
- 3rd Symposium on Management of Future Motorway and Urban Traffic Systems, Luxembourg (online). (2020)
- 33^o Congresso de Pesquisa e Ensino em Transportes, Balneário Camboriú, Brasil. (2019)
- 32^o Congresso de Pesquisa e Ensino em Transportes, Gramado, Brasil. Presentation of paper **C38**. (2018)
- XXXI Congresso Nacional de Pesquisa e Ensino em Transportes, Recife, Brasil. Presentation of papers **A14**, **A15**, **A16**, and **C35**. (2017)
- 1st IFAC Conference on Cyber-Physical & Human-Systems, Florianópolis, Brazil. (2016)
- 19th International IEEE Conference on Intelligent Transportation Systems, Rio de Janeiro, Brasil. Presentation of paper **C29**. (2016)
- 1st Symposium on Management of Future Motorway and Urban Traffic Systems, Chania, Greece. Presentation of abstract **A13**. (2016)
- Seminário SincroBUS: Sistema de Informação e Controle em Tempo Real de Ônibus Urbanos, Florianópolis, Brazil. (2014)
- I Seminário sobre Mobilidade Internacional de Alunos de Graduação, Joinville, Brazil. (2014)
- III Workshop do PlanMob Joinville, Joinville, Brazil. (2014)
- Reuniões dos Grupos de Trabalho do PlanMOB: Fase de Leitura Técnica, Joinville, Brazil. (2014)
- 2^o workshop Do PAC ao Plano de Mobilidade urbana em Joinville (SC), Joinville, Brazil. (2014)
- XXXI SEURS - Seminário de Extensão Universitária da Região Sul. Parecerista de mini-cursos, Florianópolis, Brazil. (2013)
- XXVI ANPET - Congresso Nacional de Pesquisa e Ensino em Transportes, Joinville, Brazil. Presentation of paper **C20**. (2012)
- COST TU0903 Workshop and Management Committee and Workgroups Meeting, Stockholm, Sweden. (2011)
- TRB Traffic Flow Theory Committee (TFTC) Summer Conference, Annecy, France. (2010)
- Transport Research Arena 2010, Brussels, Belgium. (2010)
- COST TU0903 Workshop and Management Committee and Workgroups Meeting, Annecy, France. (2010)
- NEARCTIS 3rd Workshop: towards new research area in co-operative traffic management, Lausanne, Switzerland. Presentation of paper **A6**. (2010)
- COST TU0903 Workshop and Management Committee and Workgroups Meeting, Barcelona, Spain. Presentation with title *Modelling the VSL impact on the aggregate traffic flow behaviour based on real data*. (2010)
- COST TU0903 Management Committee and Workgroups Meeting, Haifa, Israel. (2010)
- Young European Arena of Research 2010, Brussels, Belgium. Presentation of paper **A5**. (2010)
- 12th IFAC Symposium on Control in Transportation Systems (CTS’09), Redondo Beach, USA. Presentation of paper **C8**. (2009)

- 10th International Conference on Applications of Advanced Technologies in Transportation, Athens, Greece. (2008)
- Congresso Virtual Brasileiro de Administração 2007, Online. (2007)
- 11th IFAC Symposium on Control in Transportation Systems, Delft, The Netherlands. (2006)
- XVIII ANPET - Congresso de Pesquisa e Ensino em Transportes, Florianópolis, Brazil. (2004)
- III Semana de Pesquisa e Extensão da Universidade Federal de Santa Catarina, Florianópolis, Brazil. (2003)
- I Encontro Nacional de Estudantes de Engenharia de Controle e Automação, Florianópolis, Brazil. Presentation of paper **A1**. (2001)
- XIII Congresso Brasileiro de Automática, Florianópolis, Brazil. (2000)

Updated: July 24, 2024