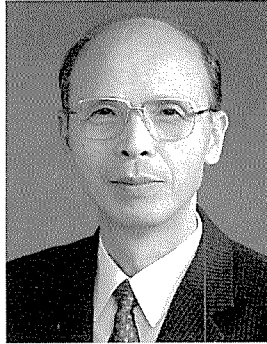


谷 順二教授業績目録

平成16年3月
東北大学史料館
(著作目録第891号)



谷 順 二 教 授 略 歴

生年月日 昭和15年11月20日生
出身地 宮城県
所 属 流体科学研究所

学 歴

昭和38年 3月 金沢大学工学部機械工学科卒業
昭和41年 3月 東北大学大学院工学研究科機械工学専攻修士課程修了
昭和44年 3月 東北大学大学院工学研究科機械工学専攻博士課程修了

職 歴

昭和38年 4月 金沢大学工学部助手
昭和44年 4月 東北大学高速力学研究所講師
昭和46年 7月 東北大学高速力学研究所助教授
昭和59年 6月 東北大学高速力学研究所教授
平成元年 6月 東北大学流体科学研究所教授に配置換
平成10年 4月 東北大学流体科学研究所所長
平成16年 3月 東北大学を定年退職

学 位

昭和44年 3月 工学博士（東北大学）

受 賞

平成 5年 4月 日本機械学会論文賞
平成 8年 4月 米国機械学会 Adaptive Structures and Material Systems Prize
平成 8年 8月 日本機械学会機械力学計測制御部門国際賞
平成 9年 7月 日本機械学会事業功労者表彰

平成9年7月	日本機械学会会員功労者表彰
平成10年4月	日本 AEM 学会著作賞
平成10年8月	日本機械学会機械力学計測制御部門功績賞
平成11年5月	日本 AEM 学会議長賞
平成12年3月	日本 AEM 学会論文賞
平成15年3月	日本 AEM 学会功績賞

学会等における活動

日本機械学会「先端技術にかかわる振動騒音制御に関する研究会」主査（昭和62年～平成4年）
 日本機械学会「電磁場下の機械・構造物のダイナミクスに関する調査研究分科会」主査（昭和63年～平成3年）
 日本機械学会 Int. J. 編集副委員（平成元年～平成3年）
 日本機械学会「制御と情報－生体への応用研究会」主査（平成元年～平成6年）
 日本機械学会「宇宙構造物のダイナミクスに関する研究会」主査（平成元年～平成5年）
 第1回電磁力関連のダイナミクスシンポジウム実行委員長（平成元年）
 第1回バイオエンジニアリングシンポジウム実行委員長（平成2年）
 International Journal of Applied Electromagnetic in Materials 編集委員（平成2年～平成10年）
 日本 AEM 学会副会長（平成2年～平成10年）
 米国機械学会高圧容器配管部門流体構造連成専門委員会委員（平成2年～平成16年）
 電磁力応用国際シンポジウム議長（平成3年）
 Smart Materials and Structures 編集委員（平成3年～現在）
 日本機械学会第1出版部会委員（平成3年～平成5年）
 日本機械学会「知能電磁材料システムに関する調査研究分科会」主査（平成3年～平成5年）
 日本機械学会機械力学・計測制御部門副部門長（平成4年～平成5年）
 日本機械学会評議員（平成5年～平成7年）
 日本機械学会機械力学・計測制御部門部門長（平成5年～平成6年）
 日本機械学会「機械力学・計測制御の新技術融合シリーズ委託出版分科会」主査（平成5年～平成16年）
 日本機械学会第2出版部会委員（平成6年～平成8年）
 日本機械学会第2世紀将来構想委員会委員（平成6年～平成8年）
 第5回適応構造物に関する国際会議議長（平成6年）
 Journal of Intelligent Material Systems and Structures 編集委員（平成7年～現在）
 マイクロシステム、知能材料、ロボットに関する国際会議議長（平成7年）
 米国機械学会宇宙工学部門適応構造物・材料システム専門委員会委員（平成7年～平成16年）
 日本機械学会「インテリジェント材料・流体システム研究会」主査（平成8年～平成10年）
 第1回インテリジェント材料と構造物に関する日仏セミナー議長（平成9年）
 JSME International Journal 編集委員（平成10年～平成11年）
 第2回インテリジェント材料と構造物に関する日仏セミナー議長（平成10年）
 日本 AEM 学会顧問（平成10年～平成16年）
 スーパーコンピューティングと流体科学に関する国際会議議長（平成12年）
 日本機械学会理事、出版事業部会長（平成12年～平成14年）
 第1回高度流体情報に関する国際会議議長（平成13年）
 日本学術会議機械工学研究連絡委員会委員（平成13年～平成15年）

JSME International Journal 編集委員長 (平成14年～平成16年)

Technische Mechanik 編集委員 (平成15年～現在)

社会における活動

宇宙環境利用推進センター研究推進委員会委員 (平成6年～平成10年)

科学技術庁原子炉安全専門審査会研究開発用炉部会高速増殖原型炉もんじゅナトリウム漏えいワーキンググループ委員 (平成8年～平成10年)

通産省工業技術院東北工業技術研究所流動研究員 (平成9年～平成11年)

文部省所轄ならびに国立大学附置研究所所長会議副会長, 第1部会長, 常置委員会委員, 第2・4分科会委員 (平成10年～平成11年)

科学技術庁航空宇宙技術研究所角田宇宙推進技術研究センター運営懇談会委員 (平成10年～平成11年)

通産省中小企業事業団「新規成長産業連携支援事業に係るコーディネータ活動支援事業」「ビジネスプランストック集作成」評価委員 (平成10年～平成11年)

財団法人「機器研究会」理事長 (平成10年～現在)

群馬大学工学部機械システム工学科外部評価委員 (平成10年)

北海道大学大学院工学研究科機械工学専攻外部評価委員 (平成11年)

福井大学工学部機械工学科外部評価委員 (平成12年)

熊本大学工学部機械工学科外部評価委員 (平成12年)

福井大学工学部機械工学科外部評価委員 (平成13年)

日本技術者教育認定機構教育プログラム評価委員 (平成13年)

高知工科大学機械システム工学科外部評価委員 (平成14年)

文部科学省平成15年度科学研究費委員会審査第二部会工学小委員会委員長 (平成15年)

東京工業大学精密工学研究所外部評価委員会 (平成14年)

東海大学未来科学技術共同研究センター利用者審査委員 (平成13年～平成16年)

福島「森にしずむ都市」推進コンソシアム委員 (平成13年～平成16年)

業 績 目 録

I. 著書・編書（共著書等含む）

1. 機械力学
分担執筆：麻生和夫・谷 順二・長南征二・林 一夫, (1986), 朝倉書店.
2. Sloshing and Fluid Structure Vibration
編集者：D.C. Ma, J. Tani, S.S. Chen and W.K. Liu, (1989), ASME.
3. 衝撃破壊工学
分担執筆：前川一郎・大好 直・木幡充男・谷 順二・外4名, (1990), 技報堂.
4. Flow-Structure Vibration and Sloshing
編集者：D.C. Ma, J. Tani and S.S. Chen, (1990), ASME.
5. 電磁力応用機器のダイナミックス
分担執筆：村松文夫・谷 順二・進藤裕英・高木敏行・外8名, (1990), コロナ社.
6. Electromagnetic Force and Application
編集者：J. Tani and T. Takagi, (1991), Elsevier.
7. Fluid-Structure Vibration and Sloshing
編集者：D.C. Ma, J. Tani, K. Fujita and C.W. Lin, (1991), ASME.
8. バイオエンジニアリングー最新の話題を集めてー
編集者：谷 順二・和田 仁, (1992), 培風館.
9. Fluid-Structure Vibration and Sloshing
編集者：D.C. Ma, J. Tani, K. Fujita and C.W. Lin, (1992), ASME.
10. 知的複合材料と構造物
分担執筆：谷 順二・古屋泰文・江田 弘・森下 信・外2名, (1994), 養賢堂.
11. Proceeding of Fifth International Conference on Adaptive Structures
編集者：J. Tani, C.A. Rogers, E.J. Breitbach, M. Uchiyama and S. Chonan, (1995), Technomic Publishing Co.
12. Proceedings of the International Symposium on Microsystems, Intelligent Materials and Robots
編集者：J. Tani and M. Esashi, (1995), 東北大学生生活協同組合.

13. Proceeding of Sixth International Conference on Adaptive Structures
編集者：C.A. Rogers, J. Tani and E.J. Breitbach, (1996), Technomic Publishing Co.
14. Proceedings of the First Japan–France Seminar on Intelligent Materials and Structures
編集者：J. Tani and P.F. Gobin, (1997), 東北大学生生活協同組合.
15. Proceedings of the Second Japan–France Seminar on Intelligent Materials and Structures
編集者：P. Bourgin and J. Tani, (1998), Materlaux & Techniques.
16. Structronic Systems: Smart Structures, Devices and Systems, (Part I: Materials and Structures)
分担執筆：J. Tani and J. Qiu, (1998), Series on Stability, Vibration and Control of Systems, Ser.B, Vol.4.
17. Proceedings of the International Symposium on Smart Materials and Structures Systems
編集者：J. Tani and H. Asanuma, (1999), JSME.
18. ヘルスモニタリング
分担執筆：山本鎮男・小林昭一・谷 順二・三田 彰・外17名, (1999), 共立出版.
19. インテリジェント材料・流体システム
分担執筆：谷 順二・長南征二・戸伏壽昭・福田武人・外 5 名, (1999), コロナ社.
20. Encyclopedia of Smart Materials
編集者：M. Schwaty, A. Das, M.L. Drak, J. Tani, 外12名, (2002), John Wiley & Sons.
21. Proceedings of the First International Symposium on Advanced Fluid Information
編集者：J. Tani, (2002), 東北大学生生活協同組合.
22. Theoretical and Applied Mechanics, Japan, Vol.52
編集者：J. Tani and S. Morishita, (2003), Hokusensha

II. 調査報告書（科研費報告書など）

1. 平成元年度 科学研究費補助（一般研究(B)）研究成果報告書
「薄肉構造物の流体連成振動の能動制御に関する研究」
研究代表者：谷 順二, (1990.3), 東北大学流体科学研究所

2. 平成元年度 科学費補助金（試験研究（1））研究成果報告書
「耐振ヘッドの開発に関する研究」
研究代表者：谷 順二，（1990.3），東北大学流体科学研究所
3. 電磁場下の機械・構造物のダイナミックスに関する調査研究分科会成果報告書
谷 順二，（1991.3），社団法人日本機械学会
4. 平成3年度 科学研究補助金（試験研究（B））成果報告書
「原子炉解体用ウォータージェットロボットの運動制御システムの試作開発」
研究代表者：谷 順二，（1992.3），東北大学流体科学研究所
5. 平成5年度 科学研究費補助金（一般研究（B））研究成果報告書
「マンガン団塊採掘用場鉱管システムの安定化制御」
研究代表者：谷 順二，（1994.3），東北大学流体科学研究所
6. 平成6年度 科学研究費補助金（試験研究（B）（1））研究成果報告書
「MRI装置勾配磁場コイルドラムの振動制御システムの試作開発」
研究代表者：谷 順二，（1995.3），東北大学流体科学研究所
7. 平成7年度 科学研究費補助金（一般研究（B））研究成果報告書
「圧電フィルム積層膜によるアクティブ遮音制御」
研究代表者：谷 順二，（1996.3），東北大学流体科学研究所
8. 平成7年度～平成9年度 科学研究費補助金（基盤研究（A）（1））研究成果報告書
「気体軸受によるヘリウム膨張タービンの振動制御システムの試作開発」
研究代表者：谷 順二，（1998.3），東北大学流体科学研究所
9. 平成7年度～平成9年度 科学技術庁委託調査研究報告
「先端機能材料を用いた柔構造機械システムに関する基礎研究」
研究代表者：谷 順二，（1998.3），財団法人半導体研究振興会半導体研究所
10. 平成9年度～平成10年度 科学研究費補助金（基盤研究（B）（2））研究成果報告書
「衝撃吸収形状記憶合金アクチュエータの基礎研究」
研究代表者：谷 順二，（1999.3），東北大学流体科学研究所
11. 平成12年度～平成14年度 科学研究費補助金（基盤研究（B）（2））研究成果報告書
「システム融合設計による自動車用知的構造要素の開発」
研究代表者：谷 順二，（2003.3），東北大学流体科学研究所
12. 平成13年度～平成14年度 科学研究費補助金（基盤研究（B）（2））研究成果報告書
「超磁歪と圧電を用いた新電磁変換素子による磁気浮上システムの研究」
研究代表者：谷 順二，（2003.3），東北大学流体科学研究所

Ⅲ. 研究論文 (単独執筆・共同執筆)

1. Buckling of Truncated Conical Shells under Torsion
N. Yamaki and J. Tani, ZAMM, Bd. 49, (1969), S. 471-480.
2. Buckling of Truncated Conical Shells under Axial Compression
J. Tani and N. Yamaki, AIAA J., Vol.8, (1970), pp.568-571.
3. 截頭円錐殻の自由曲げ振動
谷 順二・八巻 昇, 日本機械学会論文集, 第36巻, (1970), 1648-1655頁.
4. 截頭円錐殻の周期的外圧による動的安定
谷 順二, 日本機械学会論文集, 第38巻, (1972), 1940-1947頁.
5. Influence of Prebuckling Deformations on the Buckling of Truncated Conical Shells under Axial Compression
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6. Dynamic Instability of Truncated Conical Shells under Periodic Axial Load
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7. Dynamic Buckling of Truncated Conical Shells under External Step Pressure
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8. Postbuckling Behavior of Circular Cylindrical Shells under Hydrostatic Pressure
N. Yamaki and J. Tani, ZAMM, Bd. 54, (1974), S. 709-714.
9. Influence of Deformations Prior to Instability on the Dynamic Instability of Conical Shells under Periodic Axial Load
J. Tani, J. Appl. Mech., Trans. ASME, Ser.E, Vol.98, (1976), pp.87-91.
10. Influence of Deformations before Instability on the Parametric Instability of Conical Shells under Periodic Pressure
J. Tani, J. Sound Vib., Vol.45, (1976), pp.253-258.
11. Hydroelastic Instability of Infinitely Long Magnetoelastic Plates
J. Tani, Bulle. Japan Soc. Mech. Engrs., Vol.20, (1977), pp.528-533.
12. Influence of Uniform Magnetic Field on the Hydroelastic Instability of a Ferromagnetic Plate
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13. Buckling of a Ferromagnetic Ring in a Radial Magnetic Field
J. Tani, Int. J. Solids Struct., Vol.13, (1977), pp.1197-1201.

14. Influence of Axisymmetric Initial Deflections on the Thermal Buckling of Truncated Conical Shells
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15. Vibration and Buckling of Fluid-Filled Cylindrical Shells under Torsion
J. Tani and H. Doki, Nucl. Engng. Design., Vol.48, (1978), pp.359-365.
16. Dynamic Stability of Annular Plates under Periodic Radial Loads
J. Tani and T. Nakamura, J. Acoust. Soc. Am., Vol.46, (1978), pp.827-831.
17. Parametric Resonance of Annular Plates under Pulsating Uniform Internal and External Loads with Different Periods
J. Tani and T. Nakamura, J. Sound Vib., Vol.60, (1978), pp.501-509.
18. Thermal Buckling of an Annular Plate with Axisymmetric Initial Deflection
J. Tani, J. Appl. Mech., Trans. ASME, Vol.45, (1978), pp.693-695.
19. Effects of Shearing Loads and In-Plane Boundary Conditions on the Stability of Thin Tubes Conveying Fluid
J. Tani and H. Doki, J. Appl. Mech., Trans. ASME, Vol.46, (1979), pp.779-783.
20. 液体で満たされた円筒殻の周期的ねじり荷重による動的安定性
八巻 昇・谷 順二・土岐 仁, 日本機械学会論文集, 第45巻, (1979), 406-413頁.
21. 軸対称初期たわみを有する加熱円環板の安定性
谷 順二・八巻 昇, 日本機械学会論文集, 第46巻, (1980), 1104-1109頁.
22. Elastic Instability of an Annular Plate under Uniform Compression and Lateral Pressure
J. Tani, J. Appl. Mech., Trans. ASME, Vol.47, (1980), pp.591-594.
23. Dynamic Stability of Annular Plates under Pulsating Torsion
J. Tani and T. Nakamura, J. Appl. Mech., Trans. ASME, Vol.47, (1980), pp.595-600.
24. Elastic Instability of a Uniform Compressed Annular Plate with Axisymmetric Initial Deflection
J. Tani and N. Yamaki, Int. J. Non-Linear Mech., Vol.16, (1981), pp.213-220.

25. Dynamic Stability of Orthotropic Annular Plates under Pulsating Torsion
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26. Elastic Instability of a Heated Annular Plate under Lateral Pressure
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27. Dynamic Stability of Truncated Conical Shells under Pulsating Torsion
J. Tani, J. Appl. Mech., Trans. ASME, Vol.48, (1981), pp.391-398.
28. Peribronchial Stress Analysis Utilizing Concentric Cylindrical Shells of Parenchyma
J. Tani, M. Nakamura, H. Sasaki, T. Okubo, T. Takishima and J. Hildebrandt, J. Biomech. Engng., Trans. ASME, Vol.104, (1982), pp.159-162.
29. Buckling of Polar Orthotropic Annular Plates under Inplane Radial Pressures,
J. Tani and H. Doki, Acta Mech., Vol.45, (1982), pp.123-140.
30. 液体を部分的に満たした円筒殻の外圧座屈
土岐 仁・八巻 昇・谷 順二, 日本機械学会論文集 (A編), 第48巻,
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31. 液体を部分的に満たした円筒殻の軸圧縮座屈
土岐 仁・八巻 昇・谷 順二, 日本機械学会論文集 (A編), 第48巻,
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32. Dynamic Stability of Orthotropic Annular Plates under Pulsating Radial Loads
J. Tani and H. Doki, J. Acoust. Soc. Am., Vol.72, (1982), pp.845-850.
33. 液体を部分的に満たした円筒殻のねじり座屈
土岐 仁・八巻 昇・谷 順二, 日本機械学会論文集 (A編), 第49巻,
(1983), 1208-1217頁.
34. 液体を部分的に満たした円筒殻のねじり座屈後の挙動一実験
土岐 仁・八巻 昇・谷 順二・大友規矩雄, 日本機械学会論文集 (A編),
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